

Internship Preliminary Project Plan Template

Intern Information

- **Intern Name:** Manuel Martinez
 - **Email Contact:** manuelmartinezint1@gmail.com
 - **Phone Number:** (479) 981-4295
 - **Date:** 07/17/2025
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Project & Mentorship

- **Project Name:** Ethercat-P Board
 - **Mentor Name:** Perera, Jeevan S. (JSC-ER511)
 - **Mentor Email:** jeevan.s.perera@nasa.gov
 - **Mentor Phone Number:**
 - **Co-Mentor Name:** Lissette Chavez
 - **Co-Mentor Email:** lissette.b.chavez@nasa.gov
 - **Co-Mentor Phone Number:**
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Intern Schedule

- **Intern Type:** ☒ Full-Time (40 hrs/week) ☐ Part-Time (15–20 hrs/week)
 - **Agreed Active Core Hours (e.g., 9 am–5 pm, M–F):**
(Fill in your scheduled hours with your mentor here)
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Project Objectives

Objective 1

- **Objective:**
Learn KiCad and Altium through tutorials and guided resources.
- **Tasks:**
 - Watch KiCad and Altium tutorials
 - Explore each software interface and basic functionality

- **Resources Required:**
KiCad, Altium Designer, tutorial videos, online documentation
 - **Anticipated Outcome:**
Gain foundational knowledge and confidence using PCB design tools for future project tasks.
 - **Anticipated Challenges:**
Learning curve and complexity in using advanced design software
 - **Deadline/Timeline:**
Weeks 1–3
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Objective 2

- **Objective:**
Use Altium to design the schematic by adding and creating footprints, and reviewing similar projects.
 - **Tasks:**
 - Import and modify component footprints
 - Create custom footprints if necessary
 - Analyze related project schematics for reference
 - **Resources Required:**
Altium Designer, datasheets, reference project files
 - **Anticipated Outcome:**
Complete schematic design and gain deeper understanding of necessary components
 - **Anticipated Challenges:**
Interpreting existing project designs and adapting components properly
 - **Deadline/Timeline:**
Weeks 4–7
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Objective 3

- **Objective:**
Design the PCB as compact as possible and complete the board order
- **Tasks:**
 - Optimize layout for size
 - Ensure all connections and layers are complete
 - Generate and verify Gerber files
 - Place PCB order
- **Resources Required:**
Altium Designer, PCB fabrication guidelines, fabrication service access
- **Anticipated Outcome:**
Produce a finalized, manufacturable PCB design that is minimal in size

- **Anticipated Challenges:**
Routing in limited space, ensuring electrical functionality in a compact design
 - **Deadline/Timeline:**
Weeks 8–10
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Roles and Responsibilities

Intern Role & Responsibilities

- Learn and apply EDA tools (KiCad, Altium)
 - Complete schematic and PCB design for the assigned project
 - Collaborate with mentor and co-mentor on design decisions
 - Seek feedback and iterate on designs
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Mentor Role

- Provide technical guidance and feedback
 - Approve progress milestones
 - Ensure alignment with project goals
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Co-Mentor Role

- Support in tool usage and troubleshooting
- Offer additional insights or project references
- Monitor task progress and timeline