ECE491 – Checkpoints & Deliverables

This document provides a semester-long overview of the major checkpoints and deliverables for ECE491. The emphasis of this semester is on building, testing, reproducibility, and transitioning a complete engineering system. Teams are expected to demonstrate measurable progress at each checkpoint, culminating in a reproducible system and a successful hand-off to the project stakeholder.

Checkpoint	**Expectations / How to Prepare** *Before Meeting*	**Meeting Agenda** *During Meeting*	**Outcome** *After Meeting*
Standing Expectations (All Checkpoints)	**Time Commitment:** Approximately 9-12 hours a week (consistent with a 3-credit-hour course) including inside and outside of class time. **GitHub Commitments (weekly):** Clear time-stamped record of your work **Faculty & Stakeholder Meetings:** Plan faculty mentor & stakeholder biweekly; x3 all-team meetings **Professional Norms:** Before meetings: Share agendas and calendar invites. After Meetings: Send follow-up email. **Iterative Process:** Revisit past work; respond to feedback & new evidence, make continuous improvements.		
Checkpoint #0: Semester Kick-off *Semester priorities, faculty mentor engagement, stakeholder alignment* **OUTCOME DUE: Friday (01/30) by 5pm**	(If applicable) Attend ECE490 stakeholder pitches involving your project stakeholder. Assist ECE490 students in the team formation process. Review ECE490 feedback and identify areas of improvement. Draft of the engineering responsibility plan (click here). Continue to prioritize system prototype implementation.	Discuss and refine engineering responsibility plan Prepare agenda for first stakeholder meeting of the semester (*include engineering responsibility plan*)	Submit team contract / role formation. (click here) Schedule first meeting with project stakeholder. Recommend meeting every 2 weeks (or more). (see professional email example) *Reminder: Continue to meet standing expectations, including weekly meaningful GitHub commits*

Checkpoint #1: Early Accountability & Ownership *Identification of team/individual priorities* **OUTCOME DUE: Friday (02/06) by 5pm**	Refine draft of team responsibility matrix outlining individual ownership. Bring to meeting and be ready to discuss. Plan Engineering Report Updates (*see midterm deliverables I*) • Update ECE490 sections considering system changes and feedback received. Continue to prioritize system prototype implementation.	Iterate and discuss updates to the engineering responsibility matrix, including: • How work is distributed among team members • Project risks, unknowns, and open questions • Define technical artifacts and set deadlines. Discuss engineering report updates	Submit engineering responsibility matrix Commit updates to the ECE490 sections of the engineering design report onto GitHub. Order parts for any required design changes (subject to stakeholder approval). See GitHub for purchasing information
Checkpoint #2: Testing Strategy *A structured test plan specifying what will be tested, how success will be measured.* **OUTCOME DUE: Friday (02/13) by 5pm**	Schedule the first all-team meeting with your stakeholder and faculty mentor Draft a plan for how system will be tested (see system testing section of the engineering design report) Be prepared to discuss testing strategy. Continue to prioritize system prototype implementation.	**1 minute per person:** summary of progress since the previous checkpoint Discuss team's engineering testing strategy (*see engineering report guidelines - midterm deliverables I*)	Complete a "all-team meeting" with your faculty mentor and stakeholder. Approval to proceed from stakeholder and faculty mentor Submit updated engineering design report including draft of the system testing section. Register the team for UAlbany Showcase Day. *Note, date is subject to change and set by the university.*

Checkpoint #3: Preliminary System Demonstration *Demonstration of current system functionality illustrating progress toward an integrated solution.* **OUTCOME DUE: Friday (02/20) by 5pm**	Complete second all-team meeting with stakeholder and faculty mentor Continue to focus on system implementation. Be prepared to provide a prototype demonstration. Begin transitioning priority from prototype implementation towards system testing.	**1 minute per person:** progress update since the previous checkpoint Provide a short demonstration of the current system prototype. Discussion on project prototype expectations at the end of the semester, as well as ensuring that the work developed is reproducible.	Continue focusing on system prototype implementation. Update engineering design report prototype section. Prepare for initial system testing.
Checkpoint #4: Preliminary System Testing *Early test results and analysis assessing system behavior against defined success criteria.* **OUTCOME DUE: Submit with midsemester deliverable I**	Engage in preliminary testing of the system following agreed upon testing strategy. Be prepared to discuss results and analysis. Update engineering design report system testing section. Continue to finalize prototype implementation, incorporate design changes based on testing results.	**1 minute per person:** progress update since the previous checkpoint Discuss testing results and analysis.	Prepare to submit midterm semester deliverables.
Midsemester Deliverables I **DUE: Tuesday (03/03) by 5pm**	**Engineering Design Report Guidelines (click here)** *Submit on GitHub under team_deliverables folder. Updated ECE490 report to reflect the most current design. Specific emphasis on the prototype and system testing sections. Can omit future work and conclusion sections.* **Deep Dive Presentation: 25 minutes** *Define and motivate the problem, background work, present the current design, design decisions, demonstrate*		

	the system prototype, and present testing strategy. Prioritize system demo (prototype) and system testing. Make heavy use of visualizations (avoid lots of text on slides). Speak for about 15-17 minutes. The remaining time should be left for Q&A. **Self Evaluation (click here)** *Short document of your most important individual contributions thus far. This will be shared with your team.*		
Midsemester Deliverables II **DUE: Tuesday (03/10) by 5pm**	**Lightning Talk (click here)** *Exactly 5 minute presentation with auto-advancing slides. Intended as a general overview of your work.* **Peer Evaluation (click here)** *Preliminary evaluation of your peers. This will not be shared with your teammates. Submit on Brightspace, not GitHub.*		
Checkpoint #5: Project Transition & System Hand-off *Preparation of deliverables and documentation to transition system to the project stakeholder.* **OUTCOME DUE: Friday (04/03) by 5pm**	Review and reflect on midsemester performance feedback (team and individual) Prepare updates to the engineering responsibility matrix. Be prepared to discuss how the project will be handed off and transitioned to project stakeholder. Prioritize system testing and preparing system for stakeholder hand-off.	Discussion of team-level feedback and lessons learned. Discuss updated individual responsibility snapshot and risk mitigation strategies Discuss plan for handing off team's work to project stakeholder.	Updated individual responsibility snapshot Stakeholder and faculty mentor approval of project hand-off plan. Submit showcase day poster and required information. *Note: This date is subject to change and the deadline is determined by the university.*
Checkpoint #6: Reproducibility Review *Extent to which design and preliminary prototype artifacts enable reproduction and continuation by another engineer.*	Ensure GitHub repository is up-to-date and well-organized. Update the README: • Instructions for accessing core materials / files. • Document dependencies, installation instructions, etc…	Demonstrate the current prototype and system testing results. TA will seek to replicate your test results using GitHub documentation and assess reproducibility (component of file grade assessment)	Updated GitHub repository supporting reproducibility Documentation sufficient for another engineer to continue the project Finalized system testing.

OUTCOME DUE: Friday (04/10) by 5pm	• Parts list / BOM (as applicable) Ensure work completed is reproducible and ready to be handed off to project stakeholder. Complete the third all-team meeting with stakeholder and faculty mentor	Identify and address reproducibility gaps.	Submit poster to UAlbany Showcase Day organizers.
Checkpoint #7: Presentation + Prototype Demo Readiness Review *Feedback on final presentation + system demonstration* **OUTCOME DUE: Submit with final semester deliverables I**	Draft final technical deep dive presentation slides Prepare the current prototype for end-of-semester demonstration Complete the final "all-team" meeting with your stakeholder and faculty mentor.	Walk through presentation slides to review: • Narrative flow • Technical clarity • Organization and timing Demonstrate the current system prototype and test results. Receive feedback and identify final improvements	Final deep dive presentation ready for delivery Prototype prepared for final demonstration Updated GitHub documentation reflecting any final changes
Final Semester Deliverables I Deep dive presentations, self evals. **DUE: Tuesday (04/22) by 5pm**	**Deep Dive Presentation: 25 minutes** *Define and motivate the problem, background work, present the current design, design decisions, current prototype and plan for next semester. Make heavy use of visualizations (avoid lots of text on slides). Speak for about 15-17 minutes. The remining time should be left for Q&A.* **Self Evaluation (click here)**		
Final Semester Deliverables II Lightning talk & system demo. **OUTCOME DUE: Wednesday (04/29) by 5pm**	**Lightning Talk (click here):** *Exactly 5-minute presentation with auto-advancing slides. Intended as a general overview of your work. Presented at Showcase Day.* **System Demo & Poster:** *Bring poster and current system prototype to Showcase Day.*		

Final Semester Deliverables III Final report, peer evaluation **OUTCOME DUE: Monday (05/04) by 5pm**	**Engineering Design Report - Final Report (click here)** *All of the ECE490 sections.* **Peer Evaluation (click here)** *Preliminary evaluation of your peers. This will not be shared with your teammates. Submit on Brightspace, not GitHub.* **Confirm System Hand-off** *System transitioned to project stakeholder (with stakeholder confirmation) . Work is reproducible with sufficient documentation. All other department equipment returned / placed in team locker as appropriate.*