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Team 19 Work Breakdown Structure

**Laboratory # 3: Implementation Planning**

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***Work Product***

**A list of project milestones and the subtasks associated with each one.**

***Document Revision Information***

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**Approval Sheet**

**All group members whose names are listed below approve of the document and contributed fairly.**

**Member Names**

**Morgan, Laura**

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**Pledge**

**On my honor, as a student, I have neither given nor received unauthorized aid on this assignment.**

**Names**

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# Work Breakdown Structure

## Lab 2: Specification

* Verify specification of base station control software using verification checklist
  + Create verification document
  + Review and revise design documentation for comprehensiveness and consistency
* Critique  Onboard and Debugger Specification developing questions based on specification document
  + Create list of good points in the specification
  + Create a list of questions about the specification

## Lab 3: Implementation Planning

* Develop milestones list
  + Create document for milestones
  + Create milestones that are binary and verifiable
* Develop COCOMO cost estimation
  + Use the intermediate organic model
  + Choose effort adjustment attribute values
* Develop Process Report documenting work thus far, and plans for future improvement
  + Create process report document
  + Create list of accomplishments and problems
  + Write a process refinement summary
* Create schedule for future work
  + Create document for schedule
  + Add dates to milestones
* Determine new risks and decide how to resolve them
  + Create a new risks document
  + Create a list of at least 3 new risks and resolutions to them
* Review schedule and develop gantt chart based on schedule
  + Add tasks to the schedule and create a gantt chart

## Lab 4: Development Tools and Communications Protocol

* Develop support testing tool for use in development
* Review draft of communications specification
* Develop detailed and precise communications protocol specification document
  + Revise first draft of Communications Protocol Specification
  + Finalize Communications Protocol with Group 20

## Lab 5: Design

* Develop preliminary design for robot
  + Develop initial design possibilities (minimum of 3)
  + Develop criteria for each design (minimum of 3)
  + Develop alternative designs in respect to criteria
  + Decide on a design
* Develop design documentation for the design
  + Create document for the design
* Verify design through inspection
  + Create verification document
  + Review and revise design documentation for comprehensiveness and consistency

## Lab 6: End-to-End Prototype

* Develop end-to-end prototype to demonstrate functionality
* Develop test for end-to-end prototype that demonstrates functionality between on board software and base station control software
  + create goals for test
  + carry out the test
  + document results
* Develop List of changes and fixes for functionality that failed test
  + develop changes and fixes to be added to the prototype
* Develop documentation to describe test and its results
  + create documentation report for the test and the prototype

## Lab 7: Enhanced Prototype

* Develop improvements for end-to-end prototype
  + Create list of areas for improvement (minimum of 3)
* Develop enhanced prototype that includes fixes to any functionality that failed integration test, and add improvements to previous design
* Create further integration tests using the Enhanced prototype (minimum of 2)
  + create goals for test
  + carry out the test
  + document results

## Lab 8: Inspection

* Develop plan for inspecting base station control software
  + create documents including checklists for the necessary features and characteristics
* Prepare on board debugger for inspection
  + plan for issues that may be encountered
* Inspect the base station control software following created plan
  + Review and revise design documentation for comprehensiveness and consistency
* Develop Documentation on the results of the inspections
* Finalize prototype into deliverable system
  + implement changes to solve inspection problems

## Lab 9: System Delivery

* Demonstrate system to customer
* Have deliverables signed off by customer