TEAM KANALOA CONTRACT

1. **Team Leadership Structure**
    a. Project Manager (PM) [One full-time person]
        i. PM will fill representation roles:
            1. Team Captain
            2. Point-of-contact for Maritime RobotX Competition.
            3. Point-of-contact for Vertically Integrated Project (VIP) team.
            4. Administrative point-of-contact.
        ii. Task Management
            1. Task addition, removal, update, and follow-up, resource allocation, assignment of task oversight.
        iii. Facilitate and organize team meetings.
        iv. Enforce team contract.
    b. Project Manager Apprentice [One half-time person]
        i. Clearly documenting and distributing expected task objectives prior to team meetings.
        ii. Taking meeting minutes during general team meetings.
        iii. Distilling meeting minutes and distributing of updated task objectives following team meetings.
        iv. Documenting of project management status on the project website.
        v. Chiefly responsible for maintaining website (and social media).
        vi. Facilitating team meetings in the absence of the project manager.
        vii. Ensure that finance and subsystem integration apprentices upkeep their website entries.
        viii. Shadowing the current project manager with the intent of performing project manager duties in the following project session.
    c. System Integrator (SI) [One full-time person]
        i. Responsible for managing technical budget of the team by collaborating with project and subsystem leads using appropriate management tools and techniques.
        ii. Ensure compatibility of individual subsystems.
        iii. Proposing and ratifying technical task additions (both systems and subsystem-level) to project manager.
        iv. Responsible for submitting systems-level integration task updates prior to the project manager prior to general team meetings.
    d. System Integrator Apprentice [One full-time person]
        i. Clearly documenting technical budget (including subsystem and systems-level progress) on the project website.
        ii. Shadowing the current systems integrator with the intent of performing system integrator duties in the following project cycle.
    e. Finance Manager [One half-time person]

i. Maintain and manage financial budget by collaborating with project and subsystem leads using appropriate management tools and techniques.
ii. Responsible for submitting and overseeing all financial orders.
iii. Archive all physical receipts/invoices.
iv. Maintain and manage inventory of all parts purchased.
v. Responsible for actively seeking and applying for all grant and funding opportunities.
    1. All grant/funding applications must be sent to Dr. Trimble at least three days before the deadline.
    2. Applications can only be sent if they are approved by Dr. Trimble.
vi. Responsible for actively seeking and facilitating all grassroots fundraisers.
vii. Responsible for actively seeking and contacting companies for sponsorship opportunities.
    1. Companies that are being contacted must be first approved by Dr. Trimble and Karla Zarate-Ramirez (Karla.Zarate-Ramirez@uhfoundation.org)

f. Financial Manager Apprentice [One half-time person]
    i. Inventorying ordered parts.
    ii. Generating a sponsorship packet.
    iii. Documentation of finance status on the project website.
    iv. Shadowing the current finance manager with the intent of performing finance duties in the following project session.
g. Safety Manager [One half-time person]
    i. Responsible for ensuring all team members are compliant with Occupational Safety and Health Administration (OSHA), University of Hawaii, Department of Mechanical Engineering, and Department of Electrical Engineering safety regulations.
    ii. Ensure all team members have been provided the lab safety procedures, locations of fire extinguishers, first aid kits, etc.
    iii. Write standard operating procedures (SOPs) for hazardous lab practices.
    iv. Writing standard operating procedures for lab cleanliness.
    v. Enforcing the above regulations and procedures.
    vi. Has the right to stop anyone at any point in time over safety concerns.
h. Subsystem Lead [One full-time person per subsystem class]
    i. Responsible for technical budget for their respective subsystem.
    ii. Communicating with the systems integrator to ensure overall technical budget progress as necessary.
    iii. Ensure compatibility between other subsystems.
    iv. Proposing and ratifying technical task additions for their respective subsystem to project manager.
    v. Submitting subsystem-level task updates to the project manager prior to general team meetings.
    vi. Scheduling and facilitating subsystem meetings as necessary.

vii. Should not be rigid (they should be agile)—it will be the case that individual subsystems will increase and decrease their load throughout the project. Man-hour resources and technical competency should be strategically allocated to accommodate for this.

viii. Subsystem Classes

1. Energy: Responsible for supplying robot with necessary energy and power.
2. Locomotion: Responsible for general movement and control of the robot frame.
3. Hardware Interoperability: Responsible for low-level operation, and interoperability between primary computer system(s), sensors, transmitters, receivers, and actuators. e.g. wireless RF, safety light(s), motor controllers, sensors (light detection and ranging (LiDAR), sonar, Doppler velocity log (DVL), image recognition, inertial measurement unit (IMU), global positioning system (GPS)), etc.
4. Algorithmic Perception: Responsible for high-level operation of robot perception, e.g. simultaneous localization and mapping (SLAM), state estimation and sensor fusion.
5. Mission Planning: Responsible for mission-level robot operation, e.g. finite state machine, object avoidance, guidance and path planning.

i. Subsystem Members

i. Responsible for generating tasks based off the current problem within the subsystem.

ii. Responsible for communicating to the subsystem lead about current status of task.

iii. Must be an effective contributor to the subsystem.

2. Decision-Making Process

a. Any dispute or decisions that need a resolution will be discussed within the subsystem.

b. In the event that a decision can not be made within the subsystem, the discussion will open up to the entire team.

c. In the event that the team can not make a decision, the final verdict will be made by the PM.

3. Team Meeting Policy

a. General Team Meetings

i. Mondays from 4:30 PM to 5:00 PM in Holmes Hall 310.

b. Subsystem Meetings

i. Facilitated by the subsystem lead, subsystem meetings are mandatory throughout each week. Meeting times depend on the availability of every member and must be put on the Kanaloa Calendar.

c. General team meetings on federal and state holidays will be canceled.

i. PM may schedule another meeting in place of the canceled meeting on the Holiday. Meetings may occur before or after the holiday. Must notify new meeting date at least three (3) days in advance.

4. Meeting Places/Work Areas

a. All general team meetings and working done in HOLMES 310.
b. No one is allowed in the Graduate Student room.
c. IF HOLMES 310 is not available, room will be decided by PM and will notify the entire team for finalized room.
    i. Alternative meeting place
        1. POST Computer Lab
        2. HOLMES 140
        3. HOLMES 309
d. Rules of Meeting Places/Work Areas
    i. HOLMES 310
        1. Trash
            a. All food and drink trash must be placed in the trash cans outside.
            b. Large items (items that do not fit in the trash can in the lab or outside) that need to be discarded of, must be placed in the dumpster and not left inside the lab.
        2. Safety
            a. Backpacks must be placed on the shelves near the entrance doors before
            b. Cords that will be placed on the ground permanently must be covered and taped down.
            c. No trip hazards anywhere in the lab. All objects on the ground must be above the waist-level or stored under a table.
            d. No exposed sharp objects in the room.
            e. Safety glasses and other personal protection (PPE) must be stored near the entrance of the room and clearly labeled.
            f. Safety glasses must be worn at all times when working with tools, electronics, batteries, or etc.
            g. All chemicals (with the exception of hand soap) should be stored in the HAZMAT cabinet.
            h. Material safety data sheets (MSDS) are required for all chemicals. MSDS must be printed and easily accessible next to the HAZMAT cabinet.
            i. First aid kits and fire extinguishers must be easily accessible and their locations must be known by every member working in the lab.

j. Before entering the lab area, all school bags must be left on the shelf by the front door or in the computer room.

3. At the end of a working day….
    a. All tabletop surfaces must be clear, unless being used to store semi-permanent tools/machines. Large projects that will be continued to be worked on, can be left out, but must be neatly stored.
    b. Small objects (nuts, bolts, wires, etc.) must be placed in a container. No loose parts left out on tables.
    c. The student working on the table is responsible for ensuring that all tools utilized are put away its proper location and that the workspace is clean.
    d. All electronics (except for computers) and batteries must be unplugged.

ii. Ensuring Rules of Meeting places/Work Areas

1. Every member on this team is responsible for ensuring that the lab is a safe working environment.
2. All work in regards to the project will come to a halt if Rules of Meeting Places/Work Areas (Section 3.b.iii) are not met. Work may be reinstated by the PM if all Rules of Meeting Places/Work Areas (Section 3.b.iii) are met.
3. Entire team's grade may be negatively affected if the project comes to halt on the third (3) strike.
    a. First Warning - October 3, 2016

5. Absences

a. Three day notice before required and established meeting/work times.
b. Inform of future absences ahead of time as soon as possible.
c. Work out and help inform that certain days will not work.

6. Policy for Scheduling an Emergency Team Meeting

a. Finance Manager or Subsystem Integrator must request an emergency meeting to Project Manager with a justification.
b. Notify team at least three (3) days in advance if Project Manager declares that an emergency meeting is required.
c. Policy to declare an additional meeting.
    i. How to e-mail team:
        1. Must have the title: [RobotX] ADDITIONAL TEAM MEETING (Insert Date Here)
        2. In the e-mail, it must state the date, time, place, and reason for holding the meeting.

7. Expected Contribution of Work

a. If the member is taking this class for:
    i. 1 credit, at a minimum, they must work for three (3) hours per week.
    ii. 2 credits, at a minimum, they must work for six (6) hours per week.

iii. 3 credits, at a minimum, they must work for nine (9) hours per week.
iv. 4 credits, at a minimum, they must work for twelve (12) hours per week.

b. Work hours count as any time spent working outside of general team meetings.
i. Attendance and participation in team meetings
ii. Expectation to have contributed to completion of project deadlines
iii. Expectation to contribute and participate to subsystems.
iv. Expectation for respect and cooperations

8. Tolerance Policy for Non-Cooperative Member

a. Minor Issue Policy
i. Team members can openly approach other team members in a CONSTRUCTIVE AND RESPECTFUL manner to address concerns regarding behavior.
ii. Should behavior remain the same with no effort in change then issue can be brought up with (in chronological order):
1. PM
2. Entire team
3. Elevate to Serious Issue Policy

b. Serious Issue Policy
i. A discussion or talk will be done with Trimble and Brennan

9. Experimental Testing Procedures

a. All experiments must be must utilize the incremental testing procedure.
i. In the design notebook one must have
1. The date of the experiment.
2. The purpose of the experiment.
3. What are we learning from this experiment.
4. Drawings if applicable.
5. All data must be recorded.
6. Run five (5) trials in a row that successfully meet the system and functional requirements. Must provide proof that each trial was successful.
a. A trial consists of resetting settings, turning off and back on, unplugging wiring, etc.
7. If problems occur, write the down the problem and solution when figured out.
ii. Must prove to SI and the PM for the sixth (6) time that the test was successful.
iii. All tests must be successfully completed at least two hours prior to the field test day.
iv. Experiment must be proposed at least five (5) days in advance of the field test day.
1. With an exception that on the field test day, we propose another experiment.

10. Checking Emails

a. Sunday thru Saturday (even on holidays), members are required to check their emails at least once in two different parts of the day. (i.e. Morning and Afternoon, Afternoon and Night, or Morning and Night)
b. Members must also “REPLY ALL” in that email thread to acknowledge the emails that was sent by management. This enforces students to check and read their email thoroughly.

11. General VIP Syllabus

a. Upon registering for RobotX, the student must agree to the terms stated by the General VIP Syllabus here: http://rip.eng.hawaii.edu/projects/vertically-integrated-projects/. By registering for the class, it means that they fully understand the expectations of this project.

12. Peer Review

a. Reviewing other’s work in mandatory. The purpose is to ensure that as a team, we are making the best decision and we are aware of the impact it has on other subsystems. A decision can not be made by an individual unless it was reviewed by another member.