LaACES 2023: J.A.A.C. Team Contract

Team Members:

Jack Holley	jhol112@lsu.edu	+1(716)545-0572
Abigail Peck	apeck7@lsu.edu	+1(225)236-6251
Angelina Liemkeo	aliemk1@lsu.edu	+1(337)255-8220
Caroline Davis	cdav268@lsu.edu	+1(225)573-5655

Images 1 & 2
JAAC the shrimp!
He is our Mascot!

Contract Objective

The purpose of this contract is to establish a set of guidelines for all members of team J.A.A.C. (Jack, Abigail, Angelina, and Caroline) to ensure that all team members are actively contributing to the project to achieve our team goal of developing and successfully flying a payload on 22 May 2023.

Documents and Storage

➢ All documents shall be shared with all members of the team.
➢ Team members shall save all documentation created in a shared Microsoft One Drive.

1. **Microsoft One Drive** shall be used to store all documentation, files, and diagrams.

2. **Office Word** shall be used to document and make changes to all design reviews and reports.

3. **Office Excel** shall be used for any data analysis and storing experimental data.

4. Each member will record all progress done for each personal task in their **notebook** before documenting it in a word document.

5. **Office PowerPoint** shall be used for any presentations being done within the project.

6. **Microsoft Office Calendar** will be used to mark deadlines and meetings

7. A messaging **iMessage group chat** (via phone number) shall be used for simple questions and reminders.

8**. Microsoft Teams** shall be used for communication about the project.

9. All software codes shall be saved through the **Arduino program** and stored in a one drive whenever the team reviews it.

Roles & Responsibilities

All Members:

- All members shall complete their weekly assigned sections of the documentation based on their roles and responsibilities.
- All members shall complete their assigned section of PowerPoint presentations based on their roles and responsibilities.
- All members shall complete research (scientific/technical) based on their assigned part from the project manager.
- Team members with a lead role shall communicate with other leads for tasks that may need assistance from a separate engineer.
  - Example: the software engineer would need assistance with testing their sensor code from an electrical engineer who has experience with the sensors.

Member #1: Jack Holley

- Lead Mechanical Engineer
  - Design payload box
  - Construct payload box
  - Physical test payload box
  - Design & construct thermal system
  - Allocate tasks to secondary mechanical engineer
- Secondary Software Engineer
  - Assists lead software engineer's tasks

Member #2: Abigail Peck

- Lead Electrical Engineer
  - Solder components
  - Design circuits
  - Create & test circuit prototypes
  - Assemble MegaSat
  - System test MegaSat
  - Allocate tasks to secondary electrical engineer
- Secondary Mechanical Engineer
  - Assists lead mechanical engineer's tasks

Member #3: Angelina Liemkeo

- Project Manager
  - Assign Tasks
  - Take notes during meetings
  - Document team member's progress
  - Review and submit final drafts

- o Submit PowerPoint presentation
- ➢ Lead Calibration Tester
  - o Calibrate sensors
  - o Allocate tasks to secondary calibration tester
- ➢ Data Analyst
  - o Analyze flight sensor data
  - o Create graphs and charts from sensor data
- ➢ Secondary Electrical Engineer
  - o Assist lead electrical engineer's tasks

Member #4: Caroline Davis

- ➢ Lead Software Engineer
  - o Design code
  - o Create & test flight code prototypes
  - o Program MegaSat & GPS (Flight code)
  - o System test code & GPS
  - o Allocate tasks to secondary software engineer
- ➢ Data analyst
  - o Analyze flight GPS data
  - o Create graphs and charts from GPS data
- ➢ Secondary Calibration Tester
  - o Assists lead calibration person's tasks

Team Meetings (discussion based):

- ➢ **Meeting #1: Monday 3:00-4:00pm at Room 360 Nicholson Hall**
  - o Team members shall meet with LaACES flight manager to discuss their progress in LaACES and address any technical issues in the project.
- ➢ **Meeting #2: Thursday 8:30pm-9:00pm at Room 326 Nicholson Hall**
  - o We will switch to 6:00pm-7:00pm Room 326 Nicholson Hall once general lectures have concluded.
- ➢ **Meeting #3: Friday 12:30-1:30pm at Room 360 Nicholson Hall**
  - o This meeting will be utilized during the week a document is due. This meeting will be a final read through as a group to confirm the document is ready to be sent to Aaron and other LaSPACE managers.

Group Work Time:

- ➢ **Meeting #1: Monday 4:00pm-6:00pm** at Room 326 Nicholson Hall
- ➢ **Meeting #1: Tuesday 5:00pm-6:00pm** at Room 326 Nicholson Hall
- ➢ **Meeting #2: Thursday 7:00pm-8:00pm** at Room 326 Nicholson Hall

Time Slots for Rescheduled Meetings:

➢ Time slot #2: Wednesday 12:30-1:00pm Room 326 Nicholson Hall
➢ Time slot #3: Wednesday 9:00-10:00pm via online zoom
➢ Time slot #4: Sunday 12:30-1:30pm [Location varies]

1. All members shall plan & discuss their duties/tasks, expect progress, and plans for the week during the initial meeting. [REFER TO TASK ASSIGNMENT]

2. All members shall discuss their completed tasks for the week and present their progress during the closing meeting. Any leftover time will be allocated to working on assignments.

3.All members shall present an overview of what they plan to complete for the upcoming week and review the final draft of a review document (if due that Friday) in meeting #4.

4. The project manager shall record all discussed information (tasks, assignments, progress, and plans) in a word document with the appropriate file name [see to Version control].

5. After lecture period ends, lecture time period will be allocated to work.

- o Tuesday 6:00-8:00pm
- o Thursday 7:00-8:00pm

6. A member shall notify the Project Manager at least a week prior if there is a meeting that will be missed due to a scheduling conflict. [Ex. A club meeting being scheduled the same time as a team meeting]

7. In the case of a sudden emergency, a member should notify the Project Manager anytime before the scheduled meeting that they will not be present.

8. If a member is not able to come to a meeting due to personal or scholastic reasons, they shall notify the team through the group chat at least a day before the meeting.

9. Canceled team meetings shall be rescheduled to an available time slot (under time slots for rescheduled meetings).

Sample Agenda 30-minute meetings:

<u>Introduction to meeting</u>: Angelina	1:00-2:00
<u>Lead Mechanical Engineer Progress Report</u>: Jack	2:00-7:00
<u>Lead Electrical Engineer Progress Report</u>: Abigail	7:00-12:00
<u>Lead Software Engineer Progress Report:</u> Caroline	12:00-17:00
<u>Approval of Reports and Assessing Group Progress:</u>	
Angelina	17:00-22:00
<u>Discussion of next steps:</u> Angelina	22:00-28:00
<u>Questions and adjournment</u>: Angelina	28:00-30:00

Communication

➢ Group messages via phone number shall be used for personal communication and reminders between team members.

➢ Microsoft teams shall be used for project notifications between team members.

Tasks Assignment

1. Team members with an assigned lead role shall self-identify tasks based on their sections due in an upcoming milestone deadline.
2. Team members with an assigned main role shall communicate with their helpers (secondary roles) for assistance in their tasks .
3. The leads shall report a list of tasks and expected completion times (during the initial meeting) to the project manager.
4. The project manager shall overview and record all assigned weekly tasks to outlook calendar.
5. Weekly tasks for each member will be identified and reiterated during the initial meetings.n
6. Team members shall complete tasks by the final meeting of the week.
7. An overview of tasks shall be identified for the whole semester, and task overviews for an upcoming week shall be discussed at the end of the closing meeting.
8. An overview of tasks for the whole semester shall be recorded in a Gantt chart.

Assessed Progress

1. Team members' progress will be assessed by the project manager during the final meeting of the week in order to maintain an on-time schedule.
   a. A small report shall be created by each lead that lists the following: tasks that have been completed during that week, are in progress, and have not been started.
      i. The lead must obtain the signature of the Secondary for the document to be presented.
2. Each project lead is responsible for taking notes on their designated portion of the project. Each project lead is responsible for adding to a shared word document to notify the project manager of progress.

Deadlines

1. Team members shall complete their tasks of the project three days before a team deadline (refer to milestones and team deadlines section).
   a. If this is not possible, the team/member struggling will contact the project manager at least three days prior to the team task deadline in order to find a solution.
2. A final draft of a review document shall be completed a day before the LaACES deadline (Exceptions for CDR draft, CDR presentation, and FRR; refer to milestones and team deadlines section).
3. All Review documents shall be submitted by the project manager at 6:00pm the day of a LaACES milestone deadline.

Incomplete & Delayed Tasks

1. The team member shall complete their assigned weekly task before the next team meeting if they are unable to show any progress during the closing meeting.

2. One shall notify the team leader if they are unable to complete their task or have an emergency for the week during the initial meeting or via email/text.

3. If a team member is unable to complete their task after the extension and has notified the team leader beforehand, their task shall be split up to the available team members.

4. The team member will buy the whole team a meal as a penalty for not completing tasks up to date (If no excuse is made & the team leader is not contacted).

Conflict

1. In the case of a minor conflict/disagreement the disagreeing members will ask other members for their opinion and try to come to a solution.
    a. If this does not solve the problem, then the lead will have the final say.
    b. If there are more disagreements, then the project manager will have the final say.
    c. If more disagreements occur, then the problem will be posed to Aaron, and he shall be asked to give his opinion on a solution.
2. Should there be an argument during a meeting, the team will separate the team members (break time) or end the meeting.
3. Should conflict happen repeatedly over the course of 3 meetings after small problems have been resolved, the situation will be reported to the LaACES flight manager.
4. Should a team member refuse to complete their assigned task with no excuse, the team will allow the team member to *<mark>*RETHINK THEIR LIFE CHOICES*</mark>* by the next meeting.
5. LaACES manager will be contacted by the project manager if the member continues to refuse to do any work.
6. In the case of an interpersonal conflict, team members shall not intervene unless it starts to affect the team project.

Version Control

➢ All file changes made after the team's review process [reviews before deadlines and reviews from LaACES manager] will result in the file being saved as a different version.
➢ Changes in a review document that has been made after obtaining feedback from LaACES management shall result in the ones digit being increased by one.
    o Example: Version 1, 2, 3….
➢ Changes in a review document that has been made after a team review session shall result in the tenth digit being increased by .1.
    o The numbering shall reset back to .1 whenever the ones digit is changed.
        ▪ Example: Version 1.1, 1.2, 1.3…
    o The Friday meetings will result in a 0.01 change, this is reserved for simple errors such as spelling. This check is designated as the *"oh darn"* check.
        ▪ Example: Version 1.1.1, 1.1.2, 1.1.3 …

1.All review documents & contracts shall be saved as

[TEAM NAME]_[DOCUMENT]_[VERSION]_[Month.Day.Year]

Example: JAAC_TeamContract_1.1_1.23.23

2.All program/code files shall be saved as

    [CODE NAME]_[Version]_[Month.Day.Year]

    Example: sensortemp_1.1_1.23.23

3.All circuit design/flowchart files shall be saved as

    [TEAM NAME]_[DOCUMENT]_[VERSION]_[Month.Day.Year]

    Example: JAAC_CircitDesign_1.1_1.23.23

4.All mechanical design files shall be saved as

    [TEAM NAME]_[DOCUMENT]_[VERSION]_[Month.Day.Year]

    Example: JAAC_DesignDoc_1.1_1.23.23

Milestones & Team Deadlines

Team Pre-PDR Final Draft	Thursday 2 Feb. 2023
Pre-PDR	**Friday 3 Feb. 2023**
Team PDR Final Draft	Thursday 9 Feb. 2023
PDR Draft	**Friday 10 Feb. 2023**
Team PDR Final Presentation	Monday 13 Feb. 2023
PDR Presentation	**Tuesday 14 Feb. 2023**
Team PDR Final-Final Draft	Thursday 16 Feb. 2023
Final PDR	**Friday 17 Feb. 2023**
Team Pre-CDR Final Draft	Thursday 23 Mar. 2023
Pre-CDR	**Friday 24 Mar. 2023**
Team CDR Final Draft	Thursday 6 Apr. 2023
Team CDR Final Presentation	Wednesday 12 Apr. 2023
CDR Presentation	**Thursday 13 Apr. 2023**
CDR Draft	**Friday 14 Apr. 2023**
Final CDR	**Friday 14 Apr. 2023**
Team Payload Completion	Thursday 20 Apr. 2023
TV Test & Presentation	**Friday 21 Apr. 2023**

Team FRR Draft   Thursday 27 Apr. 2023

Team FRR Final Draft   Wednesday 3 May. 2023

FRR   **Monday 15 May 2023**

LaACES Launch Trip   **21 May 2023 – 26 May 2023**

FRR Defense Presentation   **22 May 2023**

Editing the Team Contract

In the event that this team contract needs to be edited after the final draft is produced and signed by all J.A.A.C. members and all LaACES management. The J.A.A.C group will convene and if there is a majority of members who wish to change the document, it will be changed and sent to LaACES management for review and signature.

NAME	SIGNATURES	DATE
TEAM JAAC		
Abigail Peck	_____	_2/2/23_
Caroline Davis	_____	_2/2/23_
Jack Holley	_____	_2/2/23_
Angelina Liemkeo	_____	_2/2/23_
SUPERVISORS		
T. Gregory Guzik	_____	_____
Aaron Ryan	_____	_____