**AEE 1201 – Introduction to Aerospace Engineering**

**“STUDENTS TEACHING ENGINEERING” GROUP PROJECT**

**Final Report (Part 2 of the Project) (100 points)**

**Learning Objectives for Group Project**

1. Allow students to exercise curiosity, make connections, and create value while developing a product or “visual aid” to illustrate an aerospace concept or emerging trend.
2. Increase student familiarity with the fabrication facilities on campus and available CAD software.
3. Build fabrication experience typical of small student projects and increase confidence in solving open-ended problems.
4. Identify lessons learned about fabrication and working in teams.
5. Expand student personal networks, and provide opportunities to practice communication and professional skills in a team setting.

**2020 Project Guidelines: Social Distancing and mixed learning modes**

1. Staying safe and following established social distance guidelines and other school rules are the #1 priorities when completing this project. The instructor can work with groups to tailor the assignment if any unique situations present themselves.
2. Groups will probably contain a mix of in-person and remote learners. Each individual in the group needs to contribute to the project and write some part of the report to receive credit for the assignment. Identify authorship of each paragraph or section in the headings, like this:

“Student Design Center (Timur) …”

“Aerospace concept to be demonstrated (Robinson)” ….

**Group Project Grades vs Individual Project Grades:**

It is OK if some students have more skills and experience than others, but everyone needs to engage with their group and find a way to add value to the project. In most cases, all members of the group will receive the same grade, but individuals who contribute little or nothing to the project will receive a reduced grade or zero grade on the project.

Any student that has a legitimate reason that he/she is unable to support his/her assigned group as planned should notify the group and the professor as soon as possible, preferably no later than 7 days before the next due date. Last-minute excuses dealing with problems of a routine nature will be considered a failure to plan, and will not be well received.

**Submission Requirements. MS Word file for the report, PowerPoint for the two slides summarizing the project. Selected projects will be highlighted in class using the slides.**

**You must upload the PowerPoint slides and the final report at the same time in CANVAS.**

**Final Group Report: Required Outline**

*Each group member should write at least one part of the report. Identify authorship of each paragraph or section in the headings.*

1. **Cover page** *(no change from preliminary report, but incorporate instructor comments)*

Include project title, group name (optional) and number, and names/ pictures of group members who participated in the project.

1. **“Making Facilities” at Florida Tech (Author’s Name)**

*(No change from preliminary report, but incorporate instructor comments)*

Describe facilities at Florida Tech that students can use to make things for class or personal projects, including the Harris Student Design Center (HSDC), Machine Shop, and Evans Library Digital Scholarship Library (DSL).

Include appropriate website links related to the space and/or available training. If anyone in the group has signed up for HSDC training to learn how to use the equipment, identify that here. (This is optional- not required).

If some members of the group are on campus and facilities are open, students are encouraged to visit the Harris Student Design Center (HSDC) and Evans Library Digital Scholarship Library (DSL), take a selfie, and include the picture in your report. (Not required for 2020)

**~~Sharing Ideas: what could we make to teach an engineering concept?~~**

***Do NOT include this section in the final report.***

1. **The engineering concept the team selected to teach (Author’s name)**

**Describe the aerospace or general engineering concept** you chose to teach **and why it is important.** If you did not go into much detail in the preliminary report, add more detail in the final report.

1. **The Visual Aid and how you made it. (Author’s name)**

Describe how you made the visual aid, where you made it, who was involved, and whether you used any resources from the Florida Tech “making facilities” to fabricate it. Using the Florida Tech facilities is NOT a requirement for Fall 2020. **Include a photo of the visual aid in the report.**

1. **Related CAD Model (Author’s name)**

In your report, **include a screenshot of the CAD model** of at least one component of your visual aid using the software of your choice. Identify which student produced the CAD model. Identify if the model was used to build the visual aid (for example if you used it to 3D print something). If the team has little to no experience with CAD, this can be a very simple model.

1. **Teaching someone using the visual aid (Author’s Name)**

Describe the process of using the visual aid/demonstration tool to teach someone. Identify who you taught, **and include a related photo or screenshot.**  **The #1 priority to do this in a safe and socially distant way.** This can be done virtually through Zoom, WhatsApp, or other remote method, or in person using masks/ social distancing. You can also teach a family member that you live with inside your COVID-19 “bubble”.

1. **Lessons Learned (Author’s Name)**

Describe some lessons learned from the project. It can either be about the engineering concept, the act of making the visual aid or the CAD model, the act of teaching others, or just the process of working in teams.

**Also Required: Two PowerPoint slides summarizing the project**

**(Only two, please!)** The instructor will highlight some of the group’s slides in the final class of the year.

**You must upload the PowerPoint slides and the final report at the same time in CANVAS. If not done at the same time, CANVAS will delete the first file uploaded.**