

**Project Title:**

Design and development of CubeSat Systems and plasma instrumentation for science missions

**Project Reference Code:**

USA-Spencer

**Host Facility:**

University of South Alabama

**Host Facility Location:**

307 N University Blvd, Mobile, Alabama

<https://www.southalabama.edu/>

**Project Description:**

The student will learn to complete the specification and design of a complete CubeSat for Science mission requirements. This includes developing a mission objective, system requirements, power budgets, link budgets, orbit parameters, instrument specification, and design iteration to achieve the desired outcomes. The student will have hands on training on the JAGSAT CubeSat that has been developed at the University of South Alabama in order to gain facility with the necessary technical skills. Mentorship will be provided by the instrument and science PI, as well as other faculty members who develop the subsystems of a satellite, namely the Control and Data Handling subsystem, the Attitude Determination and Control subsystem, and the Communications subsystem.

**Disciplines:**

Aerospace Engineering, Electrical Engineering, Physics

**Is U.S. citizenship required to participate in this project?**

Yes

**Internship Location and COVID-19 related Backup Plan**

The internship location is at University of South Alabama in Mobile, Alabama. We are planning for an in-person internship. However, due to the continuing COVID-19 pandemic, we are preparing additional options to ensure that the internship will take place, such as a hybrid or fully virtual option.

**Name(s) of Mentor(s) and contact information:**

Dr. Edmund Spencer ([espencer@southalabama.edu](mailto:espencer@southalabama.edu))

**Internship Coordinator/ HR manager:**

TBD

The name and contact information of personnel at the host facility is provided for further assistance with questions regarding the host facility or the project.

Interns will not enter into an employee/employer relationship with the host facility. No commitment with regard to later employment is implied or should be inferred.