



UNC CHARLOTTE

The WILLIAM STATES LEE COLLEGE of ENGINEERING

Senior Design Project Description for FALL 2016

Project Title: Gas Turbine Test Rig (UNCC_GT)

Supporter: UNC Charlotte

Supporter Technical Representative: ASSIGNED

Faculty Mentor: ASSIGNED TBD (check one)

Single Team Dual Team (check one)

Personnel (EN/ET): E, Cp, Cv, 2 M, SE

(Complete if the number of students required is known)

Expected person-hours: (250 per student)

Description of Project:

This team will work on the turboshaft jet engine power plant test rig. This APU is supported by Cherry Point Naval Air Station and these are typically used in Chinook helicopters for startup electricity and hydraulic power. During the summer of 2016, it was worked on by an SREU but was only able to run for thirty seconds at a time before flaming out. There is a large test rig associated with this little gas turbine.

Initial Project Requirements (e.g. weight, size, etc.):

It will include making the auxiliary power unit (APU) by Solar, operational and reliable for use in an undergraduate jet engine lab.

Expected Deliverables/Results:

The deliverable will be a working unit that is proven through testing and is ready for use in the lab.

List here any specific skills or knowledge needed or suggested (If none please state none):

Motorsports students only