INDUSTRIAL SOLUTIONS LABORATORY

Company Information

Company Name	Mechanical Engineering - Motorsports	**Date Submitted**	*6/15/2022*
Project Title	Top Fuel Motorcycle Towing Apparatus **(UNCC_ME_TOW)**	**Planned Starting Semester**	Fall 2022

Funding:

What is the source of funds that will be used to cover all of the direct costs of this project?
ME / Motorsports Department?_____

Is this source of funds already secured? Yes ___x____ No _____

Technical Contact(s)*

	Technical Contact 1	**Technical Contact 2**	**Technical Contact 3**
Name	Jim Fox	John Mcalpine	
Phone Number	704.687.7306	704.816.0061	
Email Address	Jfox66@uncc.edu	Jmcalpin@uncc.edu	

*We would like to have more than one technical contact, so there is a back-up in case of travel, sickness, job reassignment, etc.

Personnel

Typical teams will have 4-6 students, with engineering disciplines assigned based on the anticipated Scope of the Project.

Please provide your estimate of staffing in the below table. The Senior Design Committee will adjust as appropriate based on scope and discipline skills:

Discipline	**Number**	**Discipline**	**Number**
Mechanical	5	Electrical	
Computer		Systems	
Other ( )			

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Project Overview and Requirements:

Project is to design and build a quick, cheap, and easy way to tow a 1050 lb Top Fuel Motorcycle back from the other end of the racetrack after a run.
The motorcycle has a 105 inch wheelbase and wheelie bars that are another 100 inches long. The wheelie bars are the part that may present a bit of a challenge, as we don't want to detach them from the chassis after each run. See the film.
https://www.youtube.com/watch?v=XwskMr0FjLo

Requirements

Establish the design parameters working with Jim Fox. Design according to agreed parameters and build the apparatus.

The apparatus should be something that can be used on a standard trailer hitch receiver.
It needs to be light enough that one person can install it at the racetrack.
It needs to be easy for one person to load and unload the motorcycle..

Expected Deliverables/Results:

Deliverables include:

- Complete 3D CAD Design and component sources
- BOM for sources
- Documentation and calculations
- All Senior Design Specific Deliverables
- Completed and operable apparatus ready for the racetrack.

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

- Understanding of Structures
- Motorsports concentration