Ignis Cycle 2 Objectives

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Objective	Score
Pugh Matrix and Justifications - Generate a large, detailed, weighted, and justified Pugh Matrix to determine the best method of waste treatment between plasma pyrolysis, induction heating, traditional incineration, and hydrogen fueled incineration.	/250
Functional Decomposition - A functional decomposition (as described in class) of the entire waste treatment apparatus from pretreatment to disposal.	/250
CAD Model of System - A complete SolidWorks assembly of the essential components of the of the waste treatment system. Key components include the pretreatment blender and induction heating chamber/feed mechanism.	/300
Mechanical Scale Model - Likely generated by 3D printing and assembling the components of the CAD Model, the mechanical scale model will demonstrate the efficacy of moving waste through the system.	/350
Successful Generation of Heat - Obtain an inductive heating unit/chamber and use it to generate heat. The device(s) will likely be purchased and tested using power supplies available in lab.	/400
Plan Control Method - Design a feedback system that regulates the current flow through the heating coil based on the temperature measurements.	/200
Design User Interface - Develop a plan to provide the user with information on the progress of the waste treatment and allow the user to adjust settings as needed. This process includes deciding what settings the user should be able to adjust and what information is necessary to provide.	/250
Total Points	/2000