IPRO 316

Design of Biofuels (Biodiesel and Bioethanol) Production Facility for Renewable Energy Generation

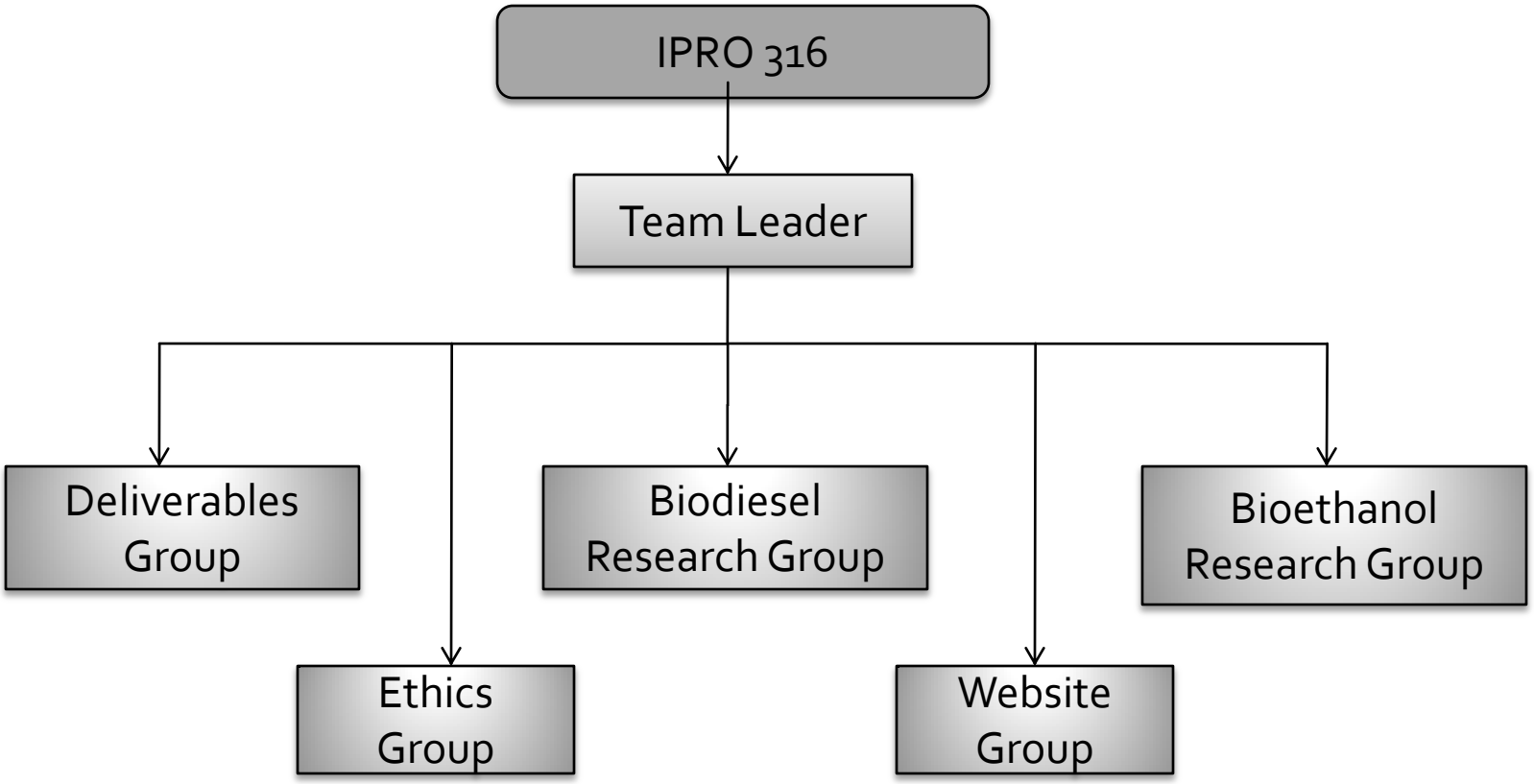
.....lets not be cruel, use alternative fuel

BIO FUEL

Objective

- **To produce a feasible small-scale chemical reaction process for the production of environmentally-friendly biofuel that meets industrial standards**
  - Develop problem solving skills
  - Work as a team to achieve a sizable task
  - Become fluent in using programming software like Matlab and HySys.

Organization of the team



- Team will be restructured over the next week as we focus specific course of action

Goals of the Project

- Determine what the sponsor, Testa Produce, wants and expects from team
  - Turn old produce into biofuel
- Research current small scale biofuel plants
  - Focus on specific feedstock
- Draft multiple possible process models
  - Find an efficient way to make biofuel and size it specifically for Testa Produce's needs
- Select and optimize model
- Perform economic analysis
- Present results to sponsor

Progress Toward Goals

- Sponsor: Testa Produce
  - Representative from Testa Produce
    - Provide information like capacity, feedstocks, etc.
  - Team to visit Testa Produce facility
  - After this week, should have the necessary information to begin preliminary process designs
- Research
  - 2 Groups: Biodiesel and Ethanol
  - Each gave presentations to share findings with team
- Ethics
  - Viewed ethics workshop & discussed as team
  - Constructed team Code of Ethics
- Website
  - Sub-team has first draft of website layout

Major Obstacles Encountered

- No initial direction for the project
- Contact with possible sponsor has been slow
- Working with 23 student members

Major Challenges Ahead

- Lack of scientific information for design
  - CHE296 Students will help with research
- Starting the bulk of our IPRO engineering work late in the semester
  - Reorganization of our Team
- Incomplete information from Testa
  - Active communication with Testa

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Questions/Comments?