**Life Cycle Assessment of Bio-based Systems**

2022 MASBio Undergraduate Summer Research Opportunity

**Faculty:** Dr. Obste Therasme

**Project Site:** Professor Therasme, Department of Sustainable Resources Management, SUNY-ESF, Syracuse, NY (https://www.esf.edu/faculty/therasme/)

**Project:** Life Cycle Assessment of Bio-based Systems

**Brief Description:** The student intern will be involved in research related to environmental life cycle analysis of the conversion of biomass resources into value added products. Sustainable biomass can be used as a feedstock for the production of heat, power, biofuels, biochemicals and biomaterials. Life cycle assessment (LCA) is a science-based, comparative analysis and assessment of the environmental impacts of product systems. The student will develop system thinking skills, apply the ISO framework to perform the life cycle analysis, learn how to analyze and summarize the data, and contribute to the production of reports.

The outcomes of this work will be helpful to the MASBio project as the project will help in communicating the environmental benefits associated with biobased products made from renewable biomass materials.

**Background Required:** The ideal candidate for this position will:

* Be a senior or junior undergraduate student studying engineering, biosystems, sustainable energy or related major;
* Have basic understanding about system approach and life cycle assessment;
* Have good work ethics;
* Have a strong commitment to working with diverse individuals and communities.

**Additional Details**:

* All students are expected to participate in person at SUNY ESF in Syracuse, NY for the duration of the program (Monday May 23 – Friday July 29, 2022)
* The stipend for this summer research opportunity is $6,000.
* The program will include field trips to biomass/bioenergy partners and facilities in the region. Transportation will be provided for these activities.
* Housing is available for the 10 week period in the dorm at ESF at a cost of $1,000 (<https://www.esf.edu/welcome/campus/centennial.htm>)

**Application:**

Submit your resume, a statement of interest (maximum of one page), college transcripts (unofficial is acceptable) and two reference letters for review to: Dr. Timothy Volk, 306 Bray Hall SUNY ESF, Syracuse, NY 13210 or tavolk@esf.edu.