



Waste to Energy Conversion

About the course

The course deals with the production of energy from different types of wastes through thermal, biological and chemical routes. It is intended to help the young scientific professionals to keep their knowledge upgraded with the current thoughts and newer technology options along with their advances in the field of the utilization of different types of wastes for energy production.

Course Plan

- Week 1 - Introduction, characterization of wastes.
- Week 2 - Energy production form wastes through incineration, energy production through gasification of wastes.
- Week 3 - Energy production through pyrolysis and gasification of wastes, syngas utilization.
- Week 4 - Densification of solids, efficiency improvement of power plant and energy production from waste plastics.
- Week 5 - Energy production from waste plastics, gas cleanup.
- Week 6 - Energy production from organic wastes through anaerobic digestion and fermentation, introduction to microbial fuel cells.
- Week 7 - Energy production from wastes through fermentation and transesterification.
- Week 8 - Cultivation of algal biomass from wastewater and energy production from algae.