BioEnergy Testing and Analysis Laboratory (BETA Lab)
Department of Biological and Agricultural Engineering
College of Agriculture and Life Sciences | College of Engineering

TEXAS A&M UNIVERSITY

REGISTRATION FORM
Hands-On Short Course on the Design and Operation of Gasification Technologies

Date of Training (Flexible)**:**
(Participants must inform BETA Lab of preferred exact training dates.)

Participant Information
(Please type or print clearly)

Full Name: _____
This name will appear on your Certificate of Training
Preferred Name (Name Card): _____
Title: _____
Company / Organization: _____
Mailing Address: _____
City: _____ **State/Province:** _____
Zip Code: _____ **Country:** _____
Phone: _____ **Fax:** _____
Email: _____
Emergency Contact (Name & Phone): _____

Training Fees and Payment Information

- **Registration Fee:** USD $2,000
- **Equipment User Fee (BAEN facilities & equipment):** USD $3,500
- **Total Training Cost per Participant: USD $5,500**

Applications are accepted under the terms described in the accompanying short course program or a revised program mutually agreed upon by the participant and BETA Lab.
Payment by check drawn on a U.S. bank or an international cashier's check in U.S. dollars must accompany the application.

Method of Payment
(Please check one)

☐ Check (Payable to **Texas A&M AgriLife Research**)
☐ Credit Card
☐ American Express ☐ Visa ☐ MasterCard ☐ Diners Club
Card Number: _____
Name on Card: _____
Expiration Date: _____
Signature: _____
Total Amount Paid: USD $ _____

Submission Information

Please mail or fax this completed application to:

Cheryl Yeager
Business Coordinator
Biological and Agricultural Engineering Department (BAEN)
Texas A&M University
College Station, TX, USA 77843-2476

Phone: 979-845-3994
Fax: 979-845-3936
Email: baen-business@exchange.tamu.edu

Hands-On Short Course on Biodiesel Production and Utilization

Duration: 1 Week

Prepared and Organized by:
BioEnergy Testing and Analysis Laboratory (BETA Lab)
Department of Biological and Agricultural Engineering (BAEN)
College of Agriculture and Life Sciences | College of Engineering
Texas A&M University
College Station, TX 77843-2476, USA

Training Pedagogy

This training program combines **morning lectures and computational exercises** with **afternoon hands-on laboratory activities**. Each lecture integrates engineering calculations and gasifier design principles. Upon completion, participants will gain the foundational skills required to operate gasification systems or function as process engineers. A complete hardcopy of training materials will be provided.

Schedule of Lectures, Computations, and Laboratory Activities

Sunday (Day 0)

- Arrival of trainee

Monday (Day 1)
Morning

- Tour of laboratory facilities and Program Overview
- Lecture 1: Overview of Gasification Processes and Products
- Lecture 2: Feedstocks for Synthesis Gas Production
- Computation 1: Yield Prediction and Plant Sizing

Afternoon

- Lab 1: Biomass analysis for Thermal Conversion
    - Heating Value (HV)
    - Proximate Analysis
    - Ultimate Analysis

Tuesday (Day 2)
Morning

- Lecture 3: Equipment and Instrumentation for Gasification
- Lecture 4: Design of Fixed-Bed and Fluidized-Bed Gasifiers
- Computation 2: Exposure time for biomass and air-to-fuel (A/F) ratio calculations

Afternoon

- Lab 2: Syngas measurement using Gas Chromatography

Wednesday (Day 3)
Morning

- Lecture 5: Fluidization Technology and Fluidized-Bed Gasifier Design
- Lecture 6: Advanced Gasification Technologies
- Computation 3: Fluidization calculations

Afternoon

- Lab 3: Operation of a Fluidized-Bed Gasifier

Thursday (Day 4)
Morning

- Lecture 7: Syngas production equipment and upgrading technologies
- Lecture 8: Power Production from Synthesis Gas
- Computation 4: Equipment Design and Control Systems Introduction

Afternoon

- Lab 4: Fluidized-Bed Gasification Control Systems

Friday (Day 5)
Morning

- Lecture 9: Strategies for Establishing Small- and Medium-Scale Gasifiers
- Lecture 10: Commercial Gasification System Design and Economics of Heat and Power Production
- Computation 5: Development of Business Plan and Economic Projections

Afternoon

- Lab 5: Eutectic Point of Biomass - Theory and Measurement

Saturday (Day 6)

- Field Visit to a Commercial Biodiesel Facility (Dayton, TX)
- Awarding of Certificates

Summary of Training

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
AM	Tour Lecture 1 Lecture 2 Comp 1	Lecture 3 Lecture 4 Comp 2	Lecture 5 Lecture 6 Comp 3	Lecture 7 Lecture 8 Comp 4	Lecture 9 Lecture 10 Comp 5	Tour of Commercial Biofuel Facility
Lunch Break						
PM	Lab 1 Biomass Analysis	Lab 2 Product Analysis	Lab 3 Fluidized Bed	Lab 4 Control Systems	Lab 5 Eutectic Points	Closing and Awarding of Certificates

Contact for Additional Technical Information

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