REGISTRATION

Hands-on Short Course on Design and Operation of Pyrolysis Technologies

Date: Flexible

(Please Type or Print Clearly) Name:_____

This name will appear on your certificate of Training

Title:_____
Company:_____ Mailing
Address:_____
City:_____State:_____ Zip
Code:_____Country: _____
Phone:_____Fax:_____ E-
mail:_____

Name Card (you would like to be called): _____

Name and phone number to contact in case of emergency:_____

The registration fee per person is US $2,000. Participants must inform BETA Lab of preferred exact dates of training program. There is an additional required Equipment User Fee amounting to $3,500 to be shared by all the participants. If there is only one participant, the total training cost is $5,500. Applications are accepted under the terms described in the accompanying short course program or a revised program agreed upon by 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 applications.

Method of Payment (mark one)

Checks payable to Texas A&M AgriLife Research.

If paying with credit card please include type of card:

American Express Visa Master Card Diners Club

Card Number: _____

Name of Card Holder: _____ Exp. Date: _____

Signature:_____ Total Amount: $_____

Mail or fax this application to:

Cheryl Yeager
Business Coordinator
Biological and Agricultural Engineering Department (BAEN)
Texas A&M University
College Station, Texas 77843-2476 U.S.A.
Tel: 979-845-3994; Fax: 979-845-3936
E-mail: business@baen.tamu.edu

Hands-on Short Course on the Design and Operation of Pyrolysis Technologies (1 Week)

Prepared and Organized by the BioEnergy Testing and Analysis Lab (BETA Lab)
Biological and Agricultural Engineering Department
College of Agriculture and Life Sciences (COALS)
Texas A&M University
College Station, TX 77843-2476 U.S.A.

Training Pedagogy
This training program is a combination of Lectures and Computational Exercises in the morning and actual hands-on exercises in the afternoon. Each training lecture is loaded with engineering calculations and the design of pyrolyzers. At the end of the training program, the trainee will have learned all basic skills in becoming a skilled operator of a pyrolyzer or process engineer. The trainee will also receive a hardcopy of complete set of training materials.

Schedule of Lectures/Computations and Lab Activities

Sunday or Day 0, Arrival of Trainee

Monday or Day 1
Morning Activities
Tour of Lab Facilities of Overview of Training Program
Lecture 1: Overview of Pyrolysis Process and Products Produced
Lecture 2: Feedstock for Making Biooil, Biochar and Synthesis Gas
Computation 1: Computations and Yield Prediction and Sizing of Plants

Afternoon Activities
Lab 1: Biomass Analysis Exercises in Preparation for Thermal Conversion (HV, Proximate and Ultimate)

Tuesday or Day 2
Morning Activities
Lecture 3: Equipment and Instruments Required for Pyrolysis Process
Lecture 4: Design of Slow and Fast Pyrolyzers
Computation 2: Calculations of exposure time for biomass in various types of pyrolyzers

Afternoon Activities
Lab 2: Measurements of syngas in a gas chromatograph and biooil and biochar

Wednesday or Day 3
Morning Activities
Lecture 5: Difference between Torrefaction and Pyrolysis
Lecture 6: The Fast Pyrolysis Processes and Design of Fast Pyrolyzers
Computation 3: Fluidization Calculations

Afternoon Activities
Lab 3: Pyrolysis of various biomass using batch reactor

Thursday or Day 4
Morning Activities
Lecture 7: Equipment and Technology for Biooil, Biochar and Syngas Production:
Lecture 8: Advanced Pyrolysys Production Processes and Upgrade of Biooil into Hydrocarbons
Computation 4 Equipment Design and Control Systems Introduction

Afternoon Activities
Lab 4: Operation of Continuous Flow Auger Pyrolyzer

Friday or Day 5
Morning Activities
Lecture 9: Strategies for the Establishment of Small and Medium-Scale Biofuels Plant
Lecture 10: Design of Commercial Systems and Economics of Bioethanol Production
Computation 5: Development of Business Plan and Simple Economic Calculations and Projections Including SAE Standards for Engine Testing

Afternoon Activities
Lab 5: Operation of State-of-the Art Fluidized Bed Pyrolyzer

Saturday or Day 6
Field Visit and Tour:

a. Visit a Commercial Biofuel Facility (Dayton, Texas)
b. Awarding of Certificates

Summary of Training

Time	Day of the Week						
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
AM	Arrival of Trainee	Tour/Lect 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 Lect 10 Comp 5	Tour of Commercial Facility
		Lunch Break					
PM		Lab 1 Biomass Analysis	Lab 2 Product Analysis	Lab 3 Batch Pyrolyzer	Lab 4 Auger Pyrolyzer	Lab 5 Fluidized Beds	Awarding and Trainee Departure

For additional technical information, write, call, fax or e-mail to:

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