



STATEWIDE WASTEWATER OPERATOR TRAINING CENTER  
STATE DEPARTMENT OF HEALTH  
HONOLULU, HAWAII

TRAINING SESSION ANNOUNCEMENT  
**215 PLANT SCIENCES (PHYSICS)**

County: City and County of Honolulu  
Location: Statewide Wastewater Operator Training Center  
1350 Sand Island Pkwy  
Dates: **February 13 and 14, 2012**  
Times: 8:00 a.m. – 11:00 a.m.  
Lunch (11:00 a.m. – 12:00 p.m.)  
12:00 p.m. – 3:00 p.m.  
Audience: Operators  
Educational Point: 1 CEU  
Instructor: Roger Babcock  
Prerequisite: *High School General Science*

### COURSE DESCRIPTION

This course consists of four major subject areas: Science Fundamentals, Properties of Matter, Heat and Process Dynamics. Plant Science #1 - Science Fundamentals cover some basic scientific principles and their applications in a process facility are introduced here, along with units of measurement for length, time, mass, pressure, temperature, flow, and level. The relationship between force and motion, the laws that apply to force and motion, the definition of work, and the relationship of work to energy are also covered. Plant Science #2 - Properties of Matter focuses on the properties of matter associated with solids, liquids, and gases, and demonstrates how these properties influence process system operation. The unit defines and explains mass, weight, density, specific gravity, buoyancy, viscosity, elasticity, and other terms associated with the effects of stress, pressure, and temperature on the three states of matter. Plant Science #3 - Heat teaches the principles of heat transfer. The relationship between temperature and thermal energy, and the effects of temperature difference on heat transfer. Sensible heat, latent boiling temperatures are covered. Plant Science #4 - Process Dynamics introduce the principles and operating characteristics of liquid, gas, and vapor systems by describing the main parts of a fluid system and the effects of pressure related to static fluids and steady-state flowing fluids.

**REGISTRATION** (*Classes are subject to **cancellation if less than three registrations** are received by the deadline.*)

1. State and County Wastewater Treatment Plant Personnel: **TUITION: Free**  
Please register as soon as possible by sending the registration form through your immediate supervisor. Supervisors will forward all registration forms to the Administrator of the Statewide Wastewater Training Center.
2. All Other Non-Municipal and Non-Wastewater Employees: **TUITION: \$110**  
Please forward your registration form and check or money order payable to: State Department of Health.

Mail to:

Administrator, Statewide Wastewater Operator Training Center  
State Department of Health  
919 Ala Moana Blvd., Room 309  
Honolulu, Hawaii 96814

**Deadline\*: February 6, 2012**

*\* Registration and Payment*

### EQUAL OPPORTUNITY

Any disabled person requiring special needs will be accommodated. Any disabled person requiring special assistance should contact the Administrator at 586-4294 or fax 586-4300.