



STATEWIDE WASTEWATER OPERATOR TRAINING CENTER  
WATER RESOURCES RESEARCH CENTER, UNIVERSITY OF HAWAII  
HONOLULU, HAWAII



TRAINING SESSION ANNOUNCEMENT  
**320 MEMBRANE BIOREACTORS (ADVANCED)**

County: Honolulu  
Location: University of Hawaii at Manoa  
Holmes Hall, room 287  
2540 Dole Street, Honolulu  
Dates: **January 6, 7 and 8, 2016**  
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.  
Ends at Noon on the 8<sup>th</sup>  
Audience: Operators, supervisors and managers  
Educational Point: **2.0 CEU**  
Instructor: Roger Babcock  
Prerequisite: *Course #210 or Vol I of Ken Kerri's course*

### COURSE DESCRIPTION

This 2.5 day course covers operation and control of membrane bioreactor activated sludge systems (MBRs) and includes site visit to a working MBR. The course will cover describe theory and mechanisms, show designs and design parameters, give expected performance removals, work sample calculations, describe system start-up, operation, maintenance, and troubleshooting. The course will be part discussion about how processes work and relative advantages/disadvantages of different systems, and part visual observation of all the components of an operating MBR treatment system. The tour will include observation of fine screens, anoxic tanks, aeration tanks, membrane units, pumping and aeration systems, PLCs and user interface along with emphasis on process inputs, start-up, normal operations, process upsets and troubleshooting, maintenance cleaning and recovery cleaning of membranes.

### REGISTRATION

1. All Treatment Plant Personnel (County, State, Private):

**TUITION: \$165**

Registration and payment for all students is completed online at:

[www.outreach.hawaii.edu/noncredit/courses](http://www.outreach.hawaii.edu/noncredit/courses)

The class will be cancelled if less than 15 students are registered by the deadline.

The maximum enrollment for this class is 30

**Deadline:  
Dec 28, 2015**

Additional Information available at

SWOTC website: [www.wrrc.hawaii.edu/swotc.shtml](http://www.wrrc.hawaii.edu/swotc.shtml)

Email: [uhwwtrainingcenter@gmail.com](mailto:uhwwtrainingcenter@gmail.com)

Phone: (808) 956-7298

### EQUAL OPPORTUNITY

Any disabled person requiring special needs will be accommodated. Any disabled person requiring special assistance should contact the Administrator at 956-7298 or [uhwwtrainingcenter@gmail.com](mailto:uhwwtrainingcenter@gmail.com).

For more information please visit our website: [www.wrrc.hawaii.edu/swotc.shtml](http://www.wrrc.hawaii.edu/swotc.shtml)