

CURRICULUM**Environmental Technology / Aquaculture**

MODULE # _____

LEARNING UNIT

Biodiesel Productions

VCTEF

MA Frameworks

OBJECTIVES	ACTIVITIES	RESOURCES	MASTERY CRITERIA
The student will:	Lecture	Handouts	Demonstrate understanding of the chemical process for biodiesel production
Understand the process and chemical reactions necessary in manufacturing biodiesel	Class discussions	World-wide web - Journey to forever - Biodiesel.org - Biodieselcommunity.org	- essay - hands on start to finish oil to biodiesel
Understand the role of a titration in determining the amounts of reactants needed for a chemical reaction.	Perform titration reactions	Biodiesel processor	Perform a titration to determine the amounts catalyst needed for biodiesel productions
Practice proper laboratory safety procedures	Produce a batch of biodiesel	Chemistry lab	Perform quality control analysis of refined biodiesel
Understand the need for quality control in an industrial process	Conduct quality control analysis of refined biodiesel	Book: From the Fryer to the Fuel Tank	Demonstrate the use of the engineering and design process, solve a problem associated with biodiesel production
Utilize the engineering and design process to solve a problem.	Engineering and design of biodiesel processes	Video: Making Biodiesel	Correctly demonstrate use of proper safety procedures
		Guest speaker – R. Lawrence	