Introduction to General Laboratory Techniques: Hands-On Sessions

The earner of this badge demonstrated understanding of laboratory techniques including common glassware, measuring mass, micropipettes, measuring concentration and volume, serological pipettes, making solutions, using a pH meter, titration, regulating temperature with hot and cold sources, working in hoods, and working with centrifuges. The earner of this badge has completed all online portions before doing hands-on assessments.

Earner:		Supervisor:		Date:	

Earning Criteria	The earner has watched a minimum of 1 video and taken 1 quiz over each given topic. The earner must earn 100% on all accompanying quizzes before doing the hands-on portion described here. The earner then demonstrates the ability to work safely in the lab given each skill. The earner is finally assessed using a cumulative in-person assessment demonstrating their ability to perform all safety procedures.
Reviewing Criteria	The supervisor will use the provided checklist to assess the earner's hands-on sessions – please use the space at the bottom of the checklist and/or the comments section to provide feedback for the earner.
Scoring Criteria	Earner must get a "Yes" in all categories to earn the badge.

	Yes	No
Skills Assessed: Lab Techniques		
Common Glassware: Identify glassware; find faults in glassware; use and clean glassware	◯	◯
Measuring Mass in the Lab: Measure liquids and solids mass; ability to use an analytical balance	◯	◯
An Introduction to the Micropipettor: Use of micropipette; calibration of micropipette	◯	◯
Understanding Concentration and Measuring Volumes: Calculating solution concentration using dilutions; making solutions of varying concentrations; use of volume transferring glassware	◯	◯
Introduction to Serological Pipettes and Pipettors: Use of serological pipettor; ability to read serological pipette graduations	◯	◯
Making Solutions in the Lab: Create 2 different solutions (one an acid taken to another concentration, one using solids)	◯	◯
Using a pH Meter: Calibrate a pH meter; take pH of solutions; use during titration	◯	◯
Introduction to Titration: Acid/Base titration with KHP and NaOH; touches on titration math	◯	◯
Regulating Temperature in the Lab: Preserving Samples Using Cold Use of liquid nitrogen/dry ice; discussions of where to store samples	◯	◯

	Yes	No
Skills Assessed: Lab Techniques		
Regulating Temperature in the Lab: Applying Heat Using hot plates; use of hot plates to degas solutions; use of hot plates for reactions	○	○
Working in Hoods: How to use a hood; when to use a hood; how to properly clean hoods	○	○
An Introduction to the Centrifuge: Use of centrifuge for experiments; safety points on a centrifuge; when to use a centrifuge	○	○

Supervisor/Issuer: Please use the space below to provide feedback for the earner.		
Recommend award of the badge:	YES ◯	NO ◯
Earner Signature:	Supervisor Signature:	Issuer Signature: