**UNBC Tree Ring Lab**

**Use Policy**

**1.0 Access**

The tree ring lab and associated equipment is available for any UNBC student or research to use. The following policy is to ensure that the facility is used efficiently and safely. Keys to the tree ring lab and EFL must be applied for, with the form signed by John Orlowsky or Doug Thompson. Once the project is completed, keys should be returned to Facilities.

**2.0 Facilities**

The UNBC Tree Ring Lab includes the following sample preparation and measuring equipment and software:

Sample preparation:

Sanding booth with dust removal system

 Table sander

 Table router

 Hand belt sander and palm sander

 Table saw

Measuring and analysis:

 Windendro measuring system, version 2012b

 Regular and large flat-bed scanners

 Velmex measuring system with Measure J2X subscription

 Several bi or trinocular stereoscopes with boom stands

 Core press

 Winseedle and Winrhizo

 Assess 2.0 Image analysis software for plant disease identification

Materials and Supplies:

 Sand paper from 40-600 grit

 Masks

 Safety glasses

 Core holders

 Glue, string, masking tape

All materials will be supplied by the lab, and costs recovered on a per sample basis.

**3.0 Project Initiation**

Prior to using any of the lab facilities, a Project Initiation form must be completed and placed in the Tree Ring Lab binder, located on the lab shelf. The form ensures that the lab use policy has been read, and that appropriate certifications and training have been obtained before using the lab. It also provides lab coordinators with a record of who is using the lab, and contact information. Blank forms are available in the binder and on the website.

**4.0 Charge-backs**

Large volume (wholesale) purchase of materials such as sand paper, masks, glue, wood for core mounts, is more cost effective than purchase for individual projects. It is also difficult to ensure that materials purchased for one project are not used for another project. Therefore, the lab coordinators have established a tree ring lab fund that will be used to keep the lab stocked with consumable materials. This fund will also be used to pay for software upgrades and replace equipment when necessary. All users of the facility must record the number of samples processed, on the Project Record of Use form, and ensure that at the end of the project, or at periodic intervals for large projects, an internal requisition is submitted to the coordinators to transfer funds from the project fund to the tree ring lab fund. Exceptions can be made for very small sample sizes. These forms are to be kept in the labelled binder in the lab.

Charge-back amounts have been estimated based on cost of materials and pro-rated equipment costs and are as follows (these assume the principal investigator for the project provides the labour):

Preparation of tree core (mounting, sanding) $1.50 per core

Core scanning or velmex $0.50 per core

Preparation of tree disc >15cm diameter $2.00 per disc

 <15cm diameter $1.00 per disc

Disc scan or velmex $0.50 per disc

**5.0 Safety and Clean-up**

It is expected that lab users will keep the lab tidy, with well-organized and labelled samples, and weekly dusting, wiping down of equipment and sweeping to remove dust. As there could be multiple users at any one time, organization and proper storage of samples is important.

When multiple people want to use the lab, use of the computers should be limited to tree ring analysis work only.

Samples must be stored on the shelves provided and properly labelled. Larger samples may be temporarily stored on the central table for processing.

When sanding or using the bandsaw, table saw or router, users must wear safety glasses, ear protection, and close-toed shoes. Dust masks are mandatory when sanding. All sanding should be in the sanding booth, with the dust extraction equipment turned on.

Only certified users will be able to use the band saw or table saw. Please see one of the lab coordinators regarding use of the band or table saw.