

## **i-Tree as a tool for Education and Collaboration**

**Laurie Stott**, Instructor, British Columbia Institute of Technology

**Stacey Auld**, British Columbia Institute of Technology

### **ABSTRACT**

From 2015 to 2018, students in the Renewable Resources (RENR), Architectural Science (ArchSci) and GIS programs at the British Columbia Institute of Technology participated in a variety of i-Tree inventory and urban forest assessment projects in partnership with several local governments in the Lower Mainland Region of British Columbia. RENR students used GPS and GIS systems and a digital version of the i-Tree Eco survey form to map several urban forest areas.

Field data from RENR students was used in project work by GIS students at the City of Maple Ridge to produce a series of ecosystem service reports and presentations for City staff. Architectural Science students used data collected from a heritage site in North Vancouver as part of a project for their course. The ArchSci students will use the data to adapt their building design to maximize effect of heritage trees on site, identify opportunities to add trees learn how trees affect energy on a site. RENR faculty are working to integrate i-Tree tools into a number of forest mensuration, digital field mapping, urban forest management and project courses for research, heritage tree, and urban natural forest fragmentation and natural capital studies.

This year, an annual challenge event (<https://commons.bcit.ca/2daychallenge/>) that includes 7 programs from the School of Construction and the Environment will incorporate the i-Tree tool into an Eco-City based Challenge for the redesign of a portion of the BCIT Burnaby Campus.

In 2018, BCIT created and launched a course for urban forest assessment as part of the RENR part-time studies courses. This course was developed out of consultation with Scott Maco from Davey Institute, David Novak, UBC Urban Forestry department and several local government agencies. The course provides a total of 24 hours of instruction, 8 online and 16 in a hands-on 2 day workshop. This course has been assessed at 22.5 continuing education credits by the ISA. The course is now running the first offering in February and will be available 3-4 times each year.

The i-Tree tool suite has provided BCIT RENR students the opportunity to collaborate with other programs at the institute, industry partners and local governments. It has also provided BCIT with the opportunity to link the skills and knowledge of staff members to part-time studies courses and offer a training course for urban forest assessment which was a need identified by industry and local government. The opportunity to use i-Tree tools to study the ecological benefits of forests and connect these values to land use management, recreation and wildlife values is an exciting and valuable exercise that we will continue to develop and explore. We are interested in sharing our experiences with the conference and discussing other opportunities and ideas for use of these tools for education and collaboration.

## **BIOGRAPHY**

**Laurie Stott** has over twenty years of experience in the natural resource industry and specifically, in field inventory projects. She has used remote imagery, the Global Positioning System and Geographic Information Systems to inventory and assess aquatic and terrestrial ecosystems. Laurie has taught in the Renewable Resource programs at BCIT for over 10 years and has developed and delivered several courses in digital field mapping, geographic information systems, computer applications and urban forest inventory. Laurie holds a degree in International Relations with a focus on economics, international development and environmental policy, a diploma in Fish, Wildlife and Recreation management and a Master's in Education and Technology. Laurie has initiated and led several i-Tree inventory and research projects using a wide range of technologies and data sources in several urban communities and co-developed a part-time studies course for Urban Forest Assessment using i-Tree tools. She continues to study the use of LiDAR with the i-Tree Eco application and is currently playing around with drones and photogrammetric imagery to see what may be possible with these technologies for urban tree and natural capital assessments.

**Stacey Auld** is a Registered Professional Forester with a background in landscape architecture and arboriculture. She has worked as an instructor and assistant at in Renewable Resources at BCIT for 3 years focused on plant communities, forest management, and GIS systems. Her career is tree-focused and westward-moving, beginning with arboriculture and landscape design in Manitoba, through silviculture forestry in Alberta, and forest planning, urban forestry, and teaching in BC.

Global i-Tree Science & Users Symposium  
- June 16<sup>th</sup> – 19<sup>th</sup>, 2019 –  
<https://www.esf.edu/itree/>