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| VIU acronym_and text | | **Advanced Diploma in GIS Applications**  **Practicum Opportunity Summary** | | |
| Project | Title: | Ecoforestry LiDAR Analysis | | |
| Organisation: | Ecoforestry Institute Society | | |
| Location: | Wildwood Ecoforest, Yellow Point | | |
| Sponsor | Name: |  | Title: |  |
| Email: |  | Phone: |  |
| Project Overview | The Ecoforestry Institute Society (EIS) is a charitable, non-profit organization which is dedicated to promoting Ecoforestry. Ecoforestry is a forest management approach that maintains or restores natural ecosystem functioning, richness, complexity, and resiliency, while providing for ecologically appropriate levels of harvest. EIS acquired 31ha “Wildwood”, a well known example of Ecoforestry, in 2016 through donations and a mortgage. Wildwood had been selectively logged by Merv Wilkinson from 1938 to 2000 and still has a high proportion of Old Growth and mature trees which is very rare in the Coastal Douglas Fir Zone. EIS was able to raise money to purchase another 2.4 ha and got entrusted to manage another 8.5 ha of the originally larger Wildwood. EIS has put Wildwood in Trust for the people of BC and can therefore not borrow against it or sell it. For more information visit EIS’ website <https://www.ecoforestry.ca>. | | | |
| Task Summary  (Types of work involved) | * Research which LIDAR data are available for Wildwood (from who, when acquired, points/m2, other characteristics?) or may be becoming available in the near future. * Produce from the best available LIDAR data: elevation model, contour map, tree heights map and more if possible (Standing Timber Volume, Coarse Woody Debris Volume & distribution, Snags volume & distribution, tree species distribution, understory …). * If existing or planned LIDAR data cannot supply us with more than the most basic information, advise what LIDAR technology and methodology would be required to achieve that. Of particular interest would be a standing and, if possible, downed (CWD) timber volume determination of high enough accuracy to be able to monitor for operational (harvest planning & to avoid overharvesting) or carbon storage purposes. * Survey for existing and available airphotos and orthophotos of good enough quality to observe changes in the forest of Wildwood over time. Analyze patterns of change (especially since 1938) from these orthophotos. Convert airphotos into orthophotos if possible. * Stump survey to augment the sparse harvest volume data available or/and design a stump survey which can produce good estimates for harvested volume over all and potentially visualize harvest levels removed on a map (areas of more and less timber harvest) * Provide written and cartographic summaries of the work completed | | | |
| Additional Information  (Appealing Aspects) | Field work for ground truthing and for stump survey (if the latter is included). Students can also attend a public tour of Wildwood. | | | |
| Funding | None  Minor (< $3,000)  Major (>$3,000) | | | |
| Workplace | Off-site  Full-Time On-Site  Other/Mixture  Description (if Other): mixture of off-site (student’s home or VIU) and field work at Wildwood | | | |
| Student Selection | Faculty Selection (Student with highest grades selected from among those interested)  Shared Selection (Faculty and Sponsor make selection based on discussion of interested students)  Sponsor Competition (Sponsor interviews, in-person or via telephone, and selects from interested students) | | | |

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