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| VIU acronym_and text | | **Advanced Diploma in GIS Applications**  **Practicum Opportunity Summary** | | |
| Project | Title: | Air Quality Mapping | | |
| Organisation: | Applied Environmental Research Laboratories | | |
| Location: | VIU | | |
| Sponsor | Name: |  | Title: | Professor and Co-Director |
| Email: |  | Phone: |  |
| Project Overview | Air quality is impacted by a number of different factors that vary dramatically over time and space. This project involves working with a team of researchers in VIU’s Applied Environmental Research Laboratories to map concentrations of air quality parameters to identify potential sources and distribution. Advanced atmospheric monitoring instruments mounted in a mobile lab report on-road concentration at 1 to 10 second intervals while driving. | | | |
| Task Summary  (Types of work involved) | Work will include   * Formatting, importing, and integrating multiple geo located chemical concentration datasets into GIS. * Interpolating chemical concentration continuous chemical concentration surface based on discrete observations. * Automating standard statistical measures such as mean, standard deviation, and z-scoring. * Integrating ambient weather, topography, traffic density, and land use into an interactive user friendly dashboard. * Integrating ambient weather data such as wind speed and direction to generate user friendly presentation of the data | | | |
| Additional Information  (Appealing Aspects) | * Practicum students will work with a research team of faculty, graduate, and undergraduate students in the Applied Environmental Research Labs. This project includes multiple project partners including local/regional governments and First Nations. * Students will have opportunities to work with project partners including Regional District of Nanaimo Engineering Department. * Participation in field work and data collection is available upon request. | | | |
| Funding | None  Minor (< $3,000)  Major (>$3,000) | | | |
| Workplace | Off-site  Full-Time On-Site  Other/Mixture  Description (if Other): Hybrid work including several days/week on campus using shared desk/office space. | | | |
| 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) | | | |

*For assistance or further information, please contact: David Cake*

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