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Guidelines for sponsoring a GIS student project

Introduction

The BCIT GIS department has been graduating students for 25+ years. Our students come from BC, but as well, across Canada and internationally. Our program is known to be very demanding, and creates students that can think through their spatial problems, manage their time, speak in public, and work together in group environments. The BCIT GIS program uses ESRI software, together with PCI, AutoCAD, and other closed source software, but also teaches the use of open source software such as MapServer, QGIS, OpenLayers and more. The students that have graduated have moved from entry level GIS technicians up to GIS managers. Municipalities, private companies, as well as the software providers, like ESRI, have all hired our graduates. We have a large cadre of graduates over the 25+ years that work here in BC and also span the globe.

The BCIT GIS industry sponsored project offers a valuable opportunity for sponsors to play a role in GIS technology education while benefiting from the student's knowledge and skills. There is *no cost* to the sponsor for GIS Projects. Liability for students will be covered under the Institute's '*Coverage For Students On Approved Industry Projects'*.

Projects can be completed by a single student, or if the project is larger with parallel tasks, in groups of two.

A project may be co-sponsored in a case where a sponsor has ideas and another sponsor has data.

This document provides information on the process to develop a project and advertise for applicants. It includes a schedule, a list of student skill sets, and the required elements of a project.

Role of the Sponsor

As a sponsor, you should undertake a GIS project with a sincere intent to:

- Develop an accurate, informative project description.
- Define clear project objectives and deliverables with the student in the planning stages.
- Provide all data if applicable.
- Provide a contact for the student for clarification of project objectives or data.
- Provide feedback to the student at the completion of the project.

Developing a GIS Project

Although the main purpose of the project is the further development of the students GIS technical skills, a successful GIS Project will contain elements of the following;

Technical Component (~300 hours)

The project should extend the student's existing knowledge and skills sets by applying these to workplace projects and processes.

Project Management Component (~60 hours)

The student will be exposed to issues in managing projects, meeting deadlines, and applying resources in an efficient manner. The management aspect of a project is mainly completed through progress reports and demonstrations to the BCIT supervisor. However sponsors my request reports and demonstrations from students.

Acquisition of Employability Skills

In addition of enhancing the technical skills, the project provides for the development of such skills as written and oral communication, independent problem solving, and teamwork skills.

Skills Timeline for GIS Students

In order to plan for a project, it is very helpful to know what skills and knowledge will be acquired from the course work. The table below shows a term-by-term summary of the material covered from September-April in the full time GIS program.

Time Frame	Material covered
September-December	• Fundamentals of GIS (45 hours) • Remote Sensing Principles & hands-on training (45 hrs) • ArcGIS software principles & hands-on training (90 hrs) • CAD for GIS (AutoCAD - 45 hours) • Database design and SQL (45 hours) • Project Planning (45 hours) • Fundamentals of Mapping – Geomatics & GPS (45 hrs) • Programming skills using Java (45 hours) • Computer Systems Fundamentals, Web GIS (45 hours)
January - March	• Oracle Database (20 hours) • Advanced GIS Programming (40 hours) • Spatial Analysis with ArcGIS (40 hours) • ArcGIS Customization with python (40 hours) • Technical Issues in GIS (20 hours) • Mapping Standards and Photogrammetry (40 hours)
March - April	• Oracle and ArcSDE (20 hours) • GIS Management (40 hours)

Project Schedule

Planning of their project takes place from September to beginning of December and execution of project takes place from January to May.

Planning Calendar

Planning and Preparation – September – December

All students are required to research and write a proposal describing their proposed project and submit this proposal early December for their BCIT planning course.

The student is required to have an industry sponsored practicum or project by the end of October so that they can submit their written proposal in December.

As the placement process may take some time it is desirable for 'Project Posting' to be received by the end of September, with the selection process to be completed by the end of October.

However, postings will be accepted from now until all students have a confirmed practicum or project. Earlier postings ensure a better selection of students.

Ideal schedule:

September	**Sponsor Submits Posting**
Late September - Mid October	Student applies to postings of interest
Mid October	Interviews and final selection of students by Sponsor
End of October	Sponsor provides a letter of offer (email) outlining the requirements to student and GIS department Student Preparation for Project (research)
November	Student Preparation for Project (research)
Early December	Student submits final Project proposal

Project Working Calendar

Project work commences in **January** and ends in **May**. A *sample* schedule is shown below (slight variations depending on statutory holidays).

10 weeks, 1 day / week = 10 days (Friday)
5 weeks, 2 days / week = 10 days (Thursday and Friday)
5 weeks, 5 days / week = 25 days (Monday – Friday)

Total 45 days or ~ 360 hours of work (300 technical and 60 management hour tasks). In general the student starts the project on the FIRST Friday in January, and finishes the Friday following Victoria Day.

The student gradually increases the amount of time spent on the project, while carrying a full-time load of courses.

This approach provides some adjustment and orientation time for the sponsor and the student, and allows the student to complete all program requirements before June convocation.

The Placement Process

Sponsoring a GIS student project can be accomplished in two ways.

1. *Initiated by Sponsor*

- Sponsor has a project idea.
- Sponsors submit a project description to the GIS Department (see contact information).
- The GIS faculty will review and approve the project to ensure it meets the educational goals of the program. If the project does the GIS faculty will then post the position.
- GIS students will apply to the sponsor for the project position.
- The sponsor will interview and select the successful student(s). BCIT may be able to assist with interview rooms or setting up telephone interviews.
- Upon completion of the selection process, sponsors are asked to advise the student and the GIS Department of their choice. Students should respond promptly to accept the offer.
- Once a student has accepted, the student, with input from the sponsor, will write the project proposal.

2. Initiated by Student

Some GIS students may undertake to develop their own project opportunities and may approach your organization on their own initiative.

- If you are interested in sponsoring a project in such a case, please develop a description and discuss with the student.
- Once a description has been developed the student and sponsor should advise the BCIT GIS department.
- GIS Faculty will review and approve the project to ensure it meets the educational goals of the program.

BCIT Faculty Project coordinator

Contact:

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Project Posting Form

If you are interested in having a GIS Project Student, please complete the form below and return to the GIS department project co-coordinator.

Geographic Information System (Project)

Supervisor Name			
Company Name			
Street Address			
City			
Province		Postal Code	
Telephone		FAX	
E-mail		Website	

Company Description:

Project Description and Objectives:

Skills and Knowledge Required for the Project: