

BCIT GIS - Frequently Asked Questions

Our faculty and staff have compiled a list of frequently asked questions. Please click the link for answers to the following questions. If you have further questions after reviewing our answers, please contact the [GIS program assistant](#).

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BCIT and GIS

Where is BCIT? What is it like there?

The GIS program is delivered on BCIT's campus in Burnaby British Columbia which is part of metro Vancouver. Vancouver is consistently named one of the best cities in the world to live, and the surrounding region has outstanding natural beauty, year-round outdoor activities, a temperate climate, and numerous cultural and social events.

Is there a lot of GIS activity in British Columbia and the Metro Vancouver region?

Yes, there are GIS user and professional groups, software and consulting firms, and a diverse GIS industry, including environmental, forestry, geology, utility, and business companies, and municipal/regional/federal government and Indigenous organizations.

What will I be able to do once I have completed the program?

You will be able to use GIS software, hardware and peripheral devices, customize GIS software, develop and design GIS databases, analyze GIS data, write software to convert GIS data formats and write utility programs, use image analysis software and integrate images and other types of GIS information, discuss and use GIS theory to make decisions concerning GIS implementation, manage a GIS, train GIS users, implement and complete a GIS project, compare and discuss GIS software products.

What type of work do the GIS graduates do?

The majority of GIS graduates are working for either private industry (forestry, GIS vendors, natural resource exploration, real estate, business geographies, computer systems) consulting companies (environmental, engineering, forestry, mapping, scanning, software) or government agencies (municipal, provincial, federal).

The graduates are developing GIS databases, using GIS to analyze data and predict the result of planned changes, managing GIS projects, planning the acquisition of GIS technology, developing GIS custom systems and training GIS users.

Why choose to study GIS at BCIT?

The BCIT GIS programs are renowned for their intensive workload and technical content. The BCIT GIS courses are developed in consultation with leading employers. Courses do not consist of simple pre-packaged software vendor training but are each uniquely designed to help you learn to solve problems and work independently. The best way to learn something is by doing it. Yes, you will have lectures but most of your time will be spent directly applying what you've learned. Our GIS Advisory Committee provides direct input to curriculum development to ensure that you'll be at the forefront of the latest developments in your industry. BCIT instructors have years of practical expertise and bring an insider's perspective of their industry knowledge and experience that will benefit you in the classroom and after you graduate.

What is the content of the GIS program?

The program starts by covering computer systems, GIS theory and GIS software. This is followed by more advanced GIS theory and software, and related GIS topics such as digital mapping, remote sensing, and database systems. The course concludes with GIS management and acquisition issues. A major GIS project or practicum is undertaken during the second part of the course to help students use all their GIS knowledge and skills and to involve students with the GIS industry.

How did BCIT decide which courses should be in the GIS program?

The courses in the GIS program are selected and designed based on ongoing input from the Program Advisory Committee, government and the GIS industry. The main goal is to provide students with current relevant skills and knowledge needed in the GIS industry.

Can I take GIS courses without applying to a GIS program?

Yes, you can try our courses that do not have prerequisites (GIST 7010, 7100, 7108, 7109, 7128, 8118) before applying to the Advanced Certificate or ADP or BTech program but you should apply as soon as you have decided to take a program as your admission is not guaranteed.

All Students

What are the options for studying GIS at BCIT?

Advanced Certificate in GIS

- Option 1: over 16 months (e.g. Fall, Winter, Spring, Fall) as a part-time student with all courses taken online.
- Option 2: over up to seven years as a part-time student with all courses taken online.

Advanced Diploma in GIS (ADP)

- Option 1: over nine months as a full-time student at the BCIT Burnaby Campus
- Option 2: over two years entirely as an online student
- Option 3: over up to five years entirely as an online student

Bachelor of Technology in GIS (BTech)

- Option 1: over two years with the first year as a full-time student at the BCIT Burnaby Campus and the second year as an online student
- Option 2: over three years entirely as an online student
- Option 3: over up to seven years as part-time student with all courses taken online

What is the Online GIS program option?

You can complete the entire chosen credential entirely online. This means you never need to attend the BCIT campus. You will complete identical course material and computer practical work as an on-campus student. Each online course is organized in a similar manner: you can use your computer to listen to lectures, connect to the BCIT computer servers, use GIS software and complete GIS software assignments just as you would in a BCIT campus computer lab, discuss questions with other class members, connect up with your instructor in virtual office hours when the instructor can help with problems and demonstrate software or access your computer to help you. You do not install GIS software on your home computer so you can use a MAC, Windows or UNIX operating system machine.

Why choose to study entirely Online?

You do not live near the BCIT Burnaby (British Columbia, Canada) campus or you have a job and want to study part-time.

What are the differences between the Advanced Certificate, the GIS Advanced Diploma and the Bachelor of Technology in GIS?

The **Advanced Certificate** in GIS is designed for a person with a full-time career, who needs to add some GIS knowledge to their existing skill set, but not be a major component of their job.

The **Advanced Diploma** is intended for students who already have a degree or diploma and are expecting to use GIS as a major component of their job.

The **BTech** is intended for technology graduates who wish to attain a baccalaureate credential.

The Advanced certificate introduces the GIS technology where the Advanced Diploma goes into technical depth.

The technical content of the ADP and BTech programs is identical although BTech students must select the project course.

The BTech also consists of additional management and Liberal Arts courses and requires six months approved GIS work experience before graduation.

How does the BCIT GIS program differ from a GIS Master's degree?

Most GIS master's degrees focus mainly on GI science and theory. At BCIT we provide a tightly structured, comprehensive education and training program in GIS technology, designed to prepare you for a career in GIS.

What qualifications do I need to get in?

All three credentials have the same entry requirements. Please refer to the [Advanced Certificate entrance requirements](#) or [ADP entrance requirements_or BTech entrance requirements](#) .

Typically, students have a Degree in Geography, Geology, Environmental Science, or Engineering, or a Diploma in Forestry, Survey, Computer Science, Engineering, or Urban Planning. Other backgrounds are also acceptable. For example, past students had degrees or diplomas in such areas as biology, physics, economics, mining, photogrammetry, or archaeology.

I have an Associate Degree. Do I qualify for entry?

Students with an Associate degree may be admitted to the program. Please refer to the [Advanced Certificate entrance requirements](#) or [ADP entrance requirements](#) or [BTech entrance requirements](#). Please contact [Program Advising](#) with admissions related questions.

I don't have a degree or a diploma. Do I qualify for entry?

If you have two years or more of university study from an accredited institution and the credits that you have earned are equivalent to an Associate degree, then you may be admitted to the program. Please contact [Program Advising](#) with admissions related questions.

What computer background do I need?

You must be a competent Personal Computer (PC) user and be able to use Windows operating systems, and 'office' programs (word- processing, spreadsheets), with confidence. You should have at least introductory level programming skills. You do not need to be a 'computer expert' but should have an aptitude for computers, enjoy working with computers and learning computer software. You should be 'web literate' and be able to create simple web pages with an HTML editor.

What are the English language entrance requirements?

Students applying to a GIS program must meet [BCIT's general English language entrance requirements](#). Please contact [Program Advising](#) with admissions related questions.

What do I need to submit for my application?

The application is all online and all documents you need are listed on the [Admission & Registration](#) Pages.

Is there a January intake?

Full-time students can only start their studies in September each year. Part-time students can start their studies in September, January or April of each year. See the suggested schedules section for more details.

Can I get credit for equivalent courses I have completed at University or College?

Yes, if approved by the GIS Department.

Once you have been admitted into the Program you can complete a [Course Credit/Exemption \[PDF\]](#) form. You will need to submit supporting documentation, such as a course outline and other documents supporting equivalent course content, for the Department to assess a transfer credit.

How do I do this?

Only courses taken within 5 years will be considered. A 5-year recency requirement is in place for all GIS courses.

Often the course outline is not enough. You must provide documentation supporting greater than 80% equivalent material. You should look at the course outline and learning objectives and make a table matching your course(s) to BCIT courses. [BCIT course outlines](#) and learning outcomes are online.

You may use one or more courses to match one of the GIST courses, however you may not use one of your courses to request exemption from multiple GIST courses.

Course credit is only assessed once you have been admitted in to one of the GIS programs.

Can I get credit for work experience?

You can apply for a [Prior Learning Assessment & Recognition](#) (PLAR) for the GIST course(s) in question.

How do I do this?

You should look at the course outline and learning objectives and make a table matching your experience to BCIT courses. [BCIT course outlines](#) and learning outcomes are online.

You would then submit a request to the department (full-time to the Program Head or part-time students to the Part-time Coordinator) detailing why you are eligible (with details and examples) for a PLAR.

Depending on the course and instructor the PLAR could be an exam, a portfolio OR other methods. See the [Prior Learning Assessment & Recognition](#) website for options:

The PLAR is 50% of the current course fee (subject to change). The PLAR fee is non-refundable regardless of the result. Payment is required prior to processing the assessment.

PLAR is only assessed once you have been admitted in to one of the GIS programs.

How do I choose between a GIS Project or a GIS Practicum?

Advanced Certificate students must complete a Capstone Project. The Capstone Project is the final course of the credential. In the course the student, with consultation with the course instructor, develops a project plan and completes the capstone project over a single term.

Advanced Diploma students can choose between a project or a practicum.

BTech students must complete a project.

The GIS Project typically involves applied research or development, in consultation with an Industry 'sponsor' the project is completed either at BCIT Burnaby campus or your study location for online students.

The GIS Practicum is workplace placed, where you will be involved with a company's GIS work.

The project or practicum is determined and planned in the GIST 7120 Planning course (full-time) or GIST 7122 Planning course (part-time) in the fall term of your final year.

The Project is executed in the GIST 8125 course where the practicum is completed in the GIST 8126 course in the following winter (and or spring) term(s).

The Capstone project is planned and executed in GIST 8150 and the final course of the Advanced Certificate.

You are strongly encouraged to start thinking about project topics or practicum workplaces that interest you.

However, it is not essential to have a project or practicum before coming into the program. The GIS faculty are in contact with industry representatives and may have some suggested projects and or practica to assist you. Most students find their own project or practicum after entering the program.

Can I continue if I fail a course?

Yes. You can repeat courses.

[BCIT Policy 5103 - Student Evaluation \(PDF\)](#) permits a maximum of three attempts to successfully complete each course within a credential.

Full-time student may be able to take a distance an online course and your graduation may be delayed. If the failed course is a prerequisite for other courses, you will have to first successfully complete it. However, you may still be able to carry on with other courses.

Where can I find the list of textbooks?

Textbook information is available in the course outline of each course under “Learning Resources.”

Students should only buy a textbook if the outline states, “mandatory.”

Many Instructors provide comprehensive notes in the Learning Hub (Learning Management System - LMS) and web links throughout the course as reading material. In some courses – depending on the instructors, no textbook is required at all.

There is no expectation that students purchase textbooks prior to the course start date. Some instructors will wait until just prior to the start date to decide on which textbook students should have, as there could be a newer version available before the course starts.

Program Abandonment

Students approved for a part-time studies program are expected to register and complete courses on a continuous basis. A student that has not completed a course from their approved program of study over a period of three consecutive academic terms will be considered to have abandoned the program.

Throughout the duration of the program, a student is permitted a maximum of five academic terms where they are not required to register and complete a course from their approved program of study. Students who exceed the five-term maximum will be

considered to have abandoned the program.

Students who have abandoned their approved program of study and wish to be reinstated will be required to reapply for a current credential. BCIT cannot guarantee that courses taken prior to this reapplication will be credited towards the current credential.

Full-time Students: ADP or BTech

How many students are in the full-time programs?

The full-time programs have a capacity of 45 students.

Do I have to select courses when registering (like University)?

No, full-time students are automatically registered for all the courses offered in the nine-month academic year.

Part-time students register on a course-by-course basis. Please refer to [Key Registration Dates Part-time Studies](#) web page to ensure you know when registration for each term opens. The part time courses fill fast.

How long will the GIS ADP or BTech take me to complete on a full-time basis?

ADP Students: Nine or ten months. Classes begin in September. If you choose a project or 'gradual' mode practicum, you will complete your course work by the end of May. 'Block' mode practicum students complete at the end of June.

BTech. Degree Students: A minimum of two years. The first year is the same as the full-time ADP as above except that you must take the project option. The second year consists of six online courses (some may have an on-campus option as well) plus acquiring six months of relevant GIS work experience.

How should I prepare for the full-time program?

There are three areas that have been identified by the GIS faculty and industry advisors: computer programming, web site skills and math.

Computer Programming:

Computer programming is emphasized strongly in the BCIT GIS program. Students who arrive unprepared usually find the programming and GIS customization courses a great deal of work, which affects other studies.

Regardless of your current abilities and experience, you should develop your skills as much as possible before you start the program. You should know programming concepts and program design before starting GIS studies at BCIT, but you do not have to know any programming language as this is covered in your course work. However, you are encouraged to start learning a programming language. The GIS program covers many programming languages. The primary language is Python.

Recommended Steps:

Complete a Python tutorial such as the [Non-Programmer's Tutorial for Python](#) Instructions for downloading and installing Python are provided.

Web Site Skills

You will be using the Web a great deal next year. You will also be developing your own web pages in September to present your resume and project. You should learn how to create simple web pages using HTML before you arrive in September.

Recommended Steps:

Complete an HTML tutorial at one of the many available on the web, for example, the [HTML primer](#) .

Mathematics Skills

We strongly advise you to refresh your skills in basic algebra, trigonometry, statistics and analytical geometry (e.g. polar and rectangular coordinates, equation of a straight line, distance between two points). You will find this helpful in several courses.

Recommended Steps:

Review your math skills for example from [Purple math](#) by reading the pertinent preliminary and beginning algebra topics.

What programming courses should I take to prepare for the full-time program?

GIST 7010 which is available online as well as on campus.

Part-time Students – ADP, BTech, Adv Cert

Can I complete the entire program through online and distance learning?

Yes, all courses are available online.

How long will the GIS program take me to complete on a part-time basis?

This depends on your educational background and on how many courses you take each semester. It is possible to complete the ADP in two years or the BTech in three years or the Advanced Certificate in 16 months (1.33 years) as a distance and online student.

This Online schedule commits you to at least 30 hours per week of course work between September and the end of June each year and is only suitable for a student with a part-time job. Students who are working full-time should be able to complete the part-time ADP in four years or BTech in five years or the Advanced Certificate in three years.

When are the part-time GIS courses offered?

See the table below for typical offerings of courses for the ADP, BTech and some Advanced Certificate courses.

			Fall	Winter	Spring	Requires department approval to register	Prerequisites
Tech	GIST 7010	GIS Programming 1	x		x		
	GIST 7100	Fundamentals of GIS	x	x	x		
	GIST 7108	Fundamentals of Mapping	x		x		
	GIST 7109	Mapping Using Microstation (equiv to 7111 FTS)	x		x		
	GIST 7128	ArcGIS 1: Introduction	x	x	x		
	GIST 7130	GIS Computing and the Internet	x		x		Previous programming experience required OR 7010 must be taken concurrently
	GIST 7132	GIS Database Systems 1	x				7010* (* may be taken concurrently)
	GIST 8010	GIS Programming 2		x	x	x	7010
	GIST 8100	Technical Issues in GIS		x		x	7100 and 7130
	GIST 8106	Spatial Analysis			x	x	7010 and 8128
	GIST 8117	Cartography and GeoVisualization (equiv to 8107 FTS)			x	x	7108
	GIST 8118	GIS Remote Sensing	x	x	x		7010 and 8128

	GIST 8128	ArcGIS 2: Data Management & Analysis	x	x	x	x	7128
	GIST 8132	GIS Database Systems 2		x		x	7132
	GIST 8138	ArcGIS 3: Customization and Modelling			x	x	8010* and 8128 (* may be taken concurrently)
Mgmt							
	GIST 8110	Management Issues in GIS			x	x	most tech courses
	GIST 8109	Geospatial Systems Management		x		x	7130
Project							
	GIST 7122	GIS Project/Practicum Proposal (GIST 7122 + TMGT7102 + 7142 = GIST 7120)	x			x - Must be in final year of courses	most tech courses
	GIST 8125	GIS Project		x		x - Must be in final year of courses	7122 and most tech courses
	GIST 8126	GIS Industry Practicum		x		x - Must be in final year of courses	7122 most tech courses

Advanced Certificate specific courses

			Fall	Winter	Spring	Requires department approval to register	Prerequisites
Tech	GIST 7160	GIS and Big Data	x	x	x	x	7100 and 7128

	GIST 8140	Mapping and Cartography			x		7100
Project	GIST 8150		X	X	X	X	Completion of all courses

PLEASE NOTE: These GIST course offerings are subject to change. Courses may be canceled due to low enrollment.

Where is the part-time course schedule?

Part-time students are responsible for planning a course schedule and registering for courses. When reviewing course descriptions, pay special attention to the prerequisites.

Please refer to [Key Registration Dates Part-time Studies](#) web page to ensure you know when registration for each term opens. The part time courses fill fast.

Consult with the GIS Part-time Studies Coordinator for additional advice.

Are there suggested schedules of courses?

Yes. The following tables show sample schedules of studies. Note: all samples start in the fall term.

Part-Time Student: A four-year schedule ADP or six-year BTech

This schedule is for the ADP courses and the technical BTech courses. BTech students must select GIST 8125 and must also complete other courses.

	Fall
Year 1	7100 7128
Year 2	7010 7132
Year 3	7130
Year 4	7122 TMGT 7102 TMGT 7142

Advanced Diploma students have completed all courses at the end of year 4.

BTech only

Year 5	BUSA 7205 LIBS 7001
Year 6	Applied Management Elective 6-month work experience

BTech students have completed all courses at the end of year 6.

Part-Time Student: A two-year ADP or three-year BTech Schedule

Sample schedule starting September. ***You must contact the department if you are intending to complete your studies with this schedule.*** Please note this is a very challenging option. It requires you to be very proactive and register and pay for courses the moment they are offered for registration (courses fill very fast), you must also have all approvals in advance of registration. Taking more than two courses a semester is only recommended if your do not have a full-time job.

	Fall	Winter	Spring
Year 1	7010 7100 7108 7128	8010 (p. 7010) 8118 8128	7109 8106 8117
Year 2	7122 TMGT 7102 TMGT 7142 7130 7132	8100 8109 8132 8125 or 8126	8110 8138 8125 or 8126

Advanced Diploma students have completed all courses at the end of year 2.

BTech

Year 3	BUSA 7205 LIBS 7001	LIBS 7002 LIBS Elective	LIBS elective TMGT elective
And	work experience	work experience	work experience

BTech students have completed all courses at the end of year 3.

Part-Time Student: Advanced Certificate four term schedule (16 months)

	Fall	Winter	Spring
Year 1	7100 7128	8118 8128	7160 8140
Year 2	8150		

Can I get exemption credit for part-time courses if I take the full-time program later?

Yes, if you have recently successfully completed the course with a good mark and the course is part of the program.

Can I get credit for part-time course tuition fees if I take the full-time program later?

No.

Which courses should part-time students do first?

Generally, you should start with GIST courses numbered at the 7-thousand level. You need to complete most 7-thousand level courses before the 8-thousand level courses. Most students start with GIST 7100 - Fundamentals of GIS to get the GIS theory, GIST 7128 - ArcGIS to get some hands-on GIS software, and GIST 7010 - GIS Programming to start practicing coding which is used in many other courses,

Is there a limit on how many courses a part-time student can take in a semester?

No - but a limit of two is suggested for those students who are working full-time.

Do I need to have my own computer?

Yes. Windows (preferred), Android, or Mac and with high speed, reliable Internet access. A desktop or laptop computer is required. A tablet or smart phone is not enough. Our GIS program software runs in a Windows environment through a CITRIX interface, so the student needs to know how to work in a Windows environment, preferably Windows 10.

Are all courses in the program offered through part-time studies?

Yes. However, not all courses will be offered every term.

How do I register for an 8000-level course through part-time studies?

All 8000-level courses, excluding 8118, require permission from the department. Students must be an accepted student in a GIS program in order to receive approval to take 8000-level courses. To get permission, email your request with your Student Number to register for the course to the [GIS program assistant](#).

Can part-time students switch to the full-time program?

Yes. Domestic students please email [Admissions](#) or international students email [International Admissions](#). to request to switch from part-time to full-time with an application fee waiver. Remember to email early as the full-time programs are often filled early in the year. You will be placed on a wait list if the program is full and you might have to wait another year.

Courses you completed as a part-time student will count as credits towards the equivalent full-time course. Tuition is not credited.

How do I write my GIS online final exams?

BCIT Geographic Information Systems (GIS) Online/Distance Learners require a special exam arrangement. All GIS exams are online exams and must be written at an approved examination centre. It is your responsibility to arrange for exam invigilation. You are also responsible for any associated costs.

List of approved Examination Centres:

BCIT Test Centre

Canadian invigilation Network (CIN) Examination Centre

National College Testing Association (NCTA) Certified Center

Information for the Exam Centre:

The Exam Centre is responsible for receiving the exam and instructions, presiding over the exam according to the instructions, informing the instructor of any unusual happenings and returning all documentation back to the Program Assistant after the student has completed the exam.

Can I use a Virtual Invigilator such as ProctorU?

No. Students are required to be physically present at an approved exam centre with an in-person invigilator to write the final exam.

If I am at another University and I wish to take a GIS course via the Western Deans' Agreement through Part-Time Studies, how does that work?

Western Dean's Agreement (WDA) Procedures for BCIT GIS Courses:

- Pre-registration forfeits the use of the fee waiver under the WDA.
- The use of the fee waiver under the WDA is not eligible for GIS online courses. The fee waiver can be applied to the on-campus courses only.
- WDA Students are provisional registrants until there are empty seats in the course.
- Registration will not be processed until two (2) business days prior to course start date.
- WDA Students do not count toward the minimum number of students required to ensure that the course runs.