Applied Computer Science (Wireless and Mobile Applications Development Option)

Bachelor of Science Part-time School of Computing and Academic Studies

Overview

The Bachelor of Science in Applied Computer Science (BScACS) degree equips you with advanced computing skills for careers in the tech sector. Within the Wireless and Mobile Applications Development Option, you'll learn to create apps for smartphones and other mobile devices, as well as master technologies like WiFi, Bluetooth, and smartwatches.

Delivery: blended. See details.

About the option

The Wireless and Mobile Applications Development Option Option integrates theory and practice, fostering critical thinking, problem-solving, and creativity. You'll figure out and test ways to make mobile apps work better by minimizing memory, CPU power, screen space, and battery, while handling wireless connection issues such as speed, reliability, and security.

About the program

- Course by course registration
- 3 intakes: January, April, and September [1]
- Offered evenings and weekends
- Up to 7 years to complete the program
- Blended delivery: on-campus (Downtown [2] and/or Burnaby [3]) and online
- Provides excellent academic foundation for graduate studies in either computer science or applied computing

See the Program Details [4] to learn more about what you can expect from BScACS [5] and how you can prepare for a career in Computing.

Who should complete the BScACS degree (Wireless and Mobile Applications Development Option)?

This program might be for you if you:

- Have completed the Computer Systems Technology (CST) [6] Diploma (or equivalent of 60.0 credits of post-secondary education in Computing)
- Enjoy weekly hands-on activities that guide you through creating apps while considering the limitations of mobile devices and wireless networks
- Want to create apps for popular mobile devices using the latest tools and software
- Are keen on going beyond common mobile phones and their cellular connections, but also want to explore other technologies like WiFi, Bluetooth, NFC, smartwatches, and sensor systems

If any of these sound like you, please check the Entrance Requirements [7] to ensure you can apply and start your new Computing career!

What Bachelor of Science in Applied Computer Science grads can do

By earning your BCIT Degree, you'll be honing your computing skills and gaining knowledge of various industry-recognized technologies.

Vancouver has been home to Canada's fastest-growing tech force for multiple years now, and you'll have the chance to join one of the 4,500 local tech companies or one of many international titans with Vancouver development studios.

And you also have the option to continue your education, including by applying to the BCIT Master of Science in Applied Computing [8] .

Learn more about future opportunities on the Graduating and Jobs page [9] .

Entrance Requirements

The Bachelor of Science in Applied Computer Science (BScACS) is a two year degree completion program, meant to be taken after two years of post-secondary education in computing.

External applicants will apply based on the pre-entry assessment. BCIT CST Diploma Graduates who graduated in the last **five** (5) years may apply directly to the program at bcit.ca/apply [10] without a pre-entry or departmental assessment. CIT and FSWD Diploma Graduates will apply based on the pre-entry assessment.

Application processing

Applications are accepted throughout the year.

Entrance requirements

This program has a two-step admission process. Applicants must meet all entrance requirements to be accepted.

Step 1: Pre-entry assessment

Applicants must have a pre-assessment with the program area to identify pre-entry courses and have their work experience reviewed and assessed prior to applying. Please email the completed Pre-entry Assessment Request form [PDF] [11] along with your resume and official sealed transcript(s) to the program coordinator.

You can apply once you have completed any necessary pre-entry courses. A completed pre-entry assessment document from the program area must be uploaded with your application.

Step 2: Meet the following entrance requirements

- **English language proficiency:** Category 2 [12] – English Studies 12 (67%) or equivalent

- **Post-secondary education:** A minimum of 60.0 credits of post-secondary education in Computing from a recognized institution, which consists of:
  - 6.0 credits of English or communications
  - 6.0 credits of math, with a minimum of 3.0 credits in discrete math
  - 3.0 credits of statistics
  - 27.0 credits of computing, with a minimum of 3.0 credits in each of the following seven courses:
    - Algorithms and data structures
    - Computer architecture
    - Database
    - Data communications and networking
    - Object-oriented programming
    - Procedural programming
    - Systems analysis and design

    In addition to the above, acceptance into the following options is subject to the following requirements:
    - Games Development Option requires familiarity with C++.
    - Network Security Development Option requires familiarity with C.
  - 18.0 of general education and/or other computing courses:
    - The BScACS Program Head will assess the equivalency of credits obtained from other institutions to ensure that graduation requirements are met.

Applicants who have completed post-secondary studies outside of Canada, the United States, the United Kingdom, Australia or New Zealand will require a comprehensive evaluation of their credentials by the International Credential Evaluation Service (ICES) [13] . Credential evaluation reports from other Canadian services [14] may be considered. These reports must include course-by-course evaluations and GPA calculations.

Read more about how to meet BCIT's entrance requirements [15]

International applicants

This program is available to international applicants who currently have a valid status in Canada [16] . A valid study permit [17] is required prior to starting the program.

Apply to program

To submit your application:

- Include proof of meeting all entrance requirements.
- Convert all transcripts and supporting documents to PDF files [18] .
- Have a credit card ready to pay the application fee.

Learn more about how to apply [20]

Scheduled Intakes

Ongoing Flexible Learning (Part-time Studies) intakes: January, April, and September. [21]

myCommunication

Within two business days of submitting your completed application, BCIT will send a message to your personal and myBCIT email addresses. All correspondence regarding your application will be posted to your online myCommunication [22] account at my.bcit.ca [23] . We will send you an email when a new message is posted. It is important to watch for these emails or regularly check your account online.

You can expect to receive communication concerning the status of your application within four weeks.

Costs & Supplies

Tuition fees

Flexible Learning (Part-time Studies) tuition is charged on a course-by-course basis. Please see the Flexible Learning Tuition & Fees [24] page for more information on domestic and international tuitions.

Financial assistance

Financial assistance may be available for this program. For more information, please contact Student Financial Aid and Awards [25] .

Courses

Program matrix

Check current availability of courses [26] for this program.

Core Courses (29.0 credits):		Credits
COMP 7003 [27]	Introduction to Information and Network Security	3.0
COMP 7012 [29]	Interaction Design	3.0
COMP 7035 [31]	Operating Systems	3.0
COMP 7082 [33]	Software Engineering	3.0

COMP 8042 [35]	Advanced Algorithms and Data Structures Design and Analysis	3.0
COMP 8082 [37]	Project Management	3.0
COMP 8085 [39]	Artificial Intelligence	3.0
MATH 7808 [41]	Calculus for Computing	4.0
MATH 7908 [43]	Linear Algebra and Applications for Computing	4.0

Specialty Courses (15.0 credits)		Credits
COMP 7031 [45]	Mobile Applications Development Fundamentals	3.0
COMP 8031 [47]	Interactive and Responsive Mobile Applications	3.0
COMP 8531 [49]	Robust and Trustworthy Mobile Applications	3.0

and choose 6.0 credits from the following courses, with at least 3.0 credits at the 8000 level:

COMP 7005 [51]	Computer Networks and Protocols	3.0
COMP 7022 [53]	Foundations of Human-Computer Interaction	3.0
COMP 7071 [55]	Database Applications Development and Optimization	3.0
COMP 7171 [57]	Data Center Design	3.0
COMP 7401 [59]	Topics in Computer Programming - Mobile Graphics	3.0
COMP 7402 [61]	Topics in Computer Programming - Cryptology	3.0
COMP 7404 [63]	Topics in Computer Programming – Artificial Intelligence	3.0
COMP 7611 [65]	Selected Topics in Computer Systems - Data Mining	3.0
COMP 7612 [67]	Selected Topics in Computer Systems – Malware Analysis	3.0
COMP 7881 [69]	Advanced Topics Software Engineering	3.0
COMP 8003 [71]	Network Security Administration	3.0
COMP 8005 [73]	Network and Security Applications Development	3.0
COMP 8022 [75]	Multimodal Interfaces	3.0
COMP 8071 [77]	Data Warehousing	3.0
COMP 8171 [79]	Database Systems Security	3.0
COMP 8505 [81]	Special Topics in Network and Security Development	3.0
COMP 8510 [83]	Applied Natural Language Processing	3.0
COMP 8522 [85]	Adaptive User Interfaces	3.0
COMP 8575 [87]	Data Mining and Analytics	3.0

Major Project (6.0 credits):		Credits
COMP 8800 [89]	Major Project 1	3.0
COMP 8900 [91]	Major Project 2	3.0

General Education (15.0 credits):		Credits
LIBS 7001 [93]	Critical Reading and Writing	3.0
LIBS 7002 [95]	Applied Ethics*	3.0

*Students who have completed the Computer Systems Technology (CST) Diploma are exempt from taking LIBS 7002 Applied Ethics since they have already taken the equivalent course, LIBS 7102 Ethics for Computing Professionals.

General Education Electives (9.0 credits):

Refer to the Bachelor of Science in Applied Computer Science (BScACS) General Education Requirements [PDF] [97] for a list of pre-approved General Education electives.

Total Credits:		65.0

Check current availability of courses [98] for this program.

Transfer credit

Do you have credits from another BC/Yukon post-secondary school? Do you want to know if they transfer to courses here at BCIT? Check out BCIT's <u>Transfer Equivalency Database [99]</u> to find out.

Program Details

Program length

Students are required to complete this program within seven years starting from the date of their first technical degree-level course or the date of acceptance to the bachelor program, whichever comes first. General Education Electives cannot be older than five years from the date of acceptance to be used toward the degree.

Exception to Section 5 of Policy 5103:

Extensions beyond the maximum time limitation will not be allowed. However, students may request a timeshift. A timeshift moves the program start year to one year later and the program completion year to one year later. With a timeshift, any COMP 7xxx and COMP 8xxx courses taken prior to the new start date will become stale-dated and not apply towards the credential. Students will need to re-take or challenge the expired courses if they wish to use them towards fulfilling program requirements. In the event of a major program change, students who timeshift will be required to follow the new program matrix. Some exemptions of equivalent courses may apply. Student requests for a timeshift shall be reviewed and approved by the Program Head and the Registrar's Office.

Grading

A minimum passing grade of 60 percent is required for all COMP courses at the 7000 and 8000 level.

Additional program options

- <u>Database Option [100]</u>
- <u>Human Computer Interface Option [101]</u>
- <u>Network Security Administration Option [102]</u>
- <u>Network Security Applications Development Option [103]</u>

Program delivery

Blended: This program is delivered partly on campus and partly online.

Once accepted into the flexible learning program, students register and complete classes on a course-by-course basis. Flexible learning courses are taught in our Downtown Vancouver Campus, Burnaby Campus, and online on weekday evenings and weekends.

Program location

Courses may be offered at the following locations:

<u>Burnaby Campus [104]</u>
3700 Willingdon Avenue
Burnaby, BC

<u>Downtown Campus [105]</u>
555 Seymour Street
Vancouver, BC

<u>Online Learning [106]</u>

Program structure

Courses	Credits
Computer Science	21.0
Mathematics	8.0
Computer Specialization	15.0
Communications, Applied Ethics and General Education	15.0
Major Project	6.0
Total credits:	**65.0**

Continue your education

Graduates of the Bachelor of Science in Applied Computer Science program can apply to continue their studies with the <u>Master of Science in Applied Computing [107]</u>. Through an interdisciplinary and rigorous full-time curriculum, the MSc helps develop technical leadership and research skills for a professional setting or for further academic study. Students select a Project & Internship Path or Thesis Path, and have opportunities to apply computing solutions to industry challenges.

Graduating & Jobs

Graduate employment outcomes

The BCIT student outcomes report presents summary findings from the annual survey of former students administered by BC Stats one to two years after graduation. These reports combine the last three years of available results for the 2021-2023 BCIT Outcomes Surveys of 2020-2022 graduates and for Degree 2019-2021 graduates. The reports are organized into three-page summaries containing information on graduates' labour market experiences and opinions regarding their education. More detailed information can be accessed at the BC Student Outcomes [108] website.

To view these results, you may need to have the Adobe Acrobat Reader [109] installed in your Web browser.

- Applied Computer Science (Wireless and Mobile Applications Development Option) [110]

Contact Us

Email: compBSc@bcit.ca
Tel: 604-432-8644

Programs and courses are subject to change without notice.

List of links found on this page

This list includes all links found on this page for your reference.

[1] https://www.bcit.ca/flexible-learning/part-time-courses-programs/flexible-learning-key-registration-dates/
[2] https://www.bcit.ca/about/visit/campuses-directions/downtown/
[3] https://www.bcit.ca/about/visit/campuses-directions/burnaby/
[4] https://www.bcit.ca/programs/applied-computer-science-wireless-and-mobile-applications-development-option-bachelor-of-science-part-time-867fbsc/#details
[5] https://www.bcit.ca/programs/bachelor-of-science-in-applied-computer-science/
[6] https://www.bcit.ca/programs/computer-systems-technology-diploma-full-time-5500dipma/
[7] https://www.bcit.ca/programs/applied-computer-science-wireless-and-mobile-applications-development-option-bachelor-of-science-part-time-867fbsc/#entry
[8] https://www.bcit.ca/programs/applied-computing-master-of-science-full-time-m600msc/
[9] https://www.bcit.ca/programs/applied-computer-science-wireless-and-mobile-applications-development-option-bachelor-of-science-part-time-867fbsc/#graduating
[10] https://secure.bcit.ca/sis/apply/
[11] https://www.bcit.ca/files/cas/computing/pdf/bscacsadmissionsprocedures.pdf
[12] https://www.bcit.ca/admission/entrance-requirements/english-language-proficiency/#category2
[13] https://www.bcit.ca/ices/
[14] https://www.cicic.ca/1374/obtain-an-academic-credential-assessment-for-general-purposes/index.canada
[15] https://www.bcit.ca/admission/entrance-requirements/
[16] https://www.bcit.ca/international-students/permits-visas-status/status-in-canada/
[17] https://www.bcit.ca/international-students/permits-visas-status/study-permits/
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[19] https://apply.educationplannerbc.ca/bcit
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[21] https://www.bcit.ca/flexible-learning/part-time-courses-programs/flexible-learning-key-registration-dates/
[22] https://www.bcit.ca/admission/after-you-apply/communicating-with-bcit/
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[24] https://www.bcit.ca/admission/tuition-fees/flexible-learning/
[25] https://www.bcit.ca/financial-aid/
[26] https://www.bcit.ca/courses/comp7003,comp7005,comp7012,comp7022,comp7031,comp7035,comp7071,comp7082,comp7171,comp7401,comp7402,comp7404,comp7611,con
[27] https://www.bcit.ca/courses/introduction-to-information-and-network-security-comp-7003/
[28] https://www.bcit.ca/outlines/comp7003/
[29] https://www.bcit.ca/courses/interaction-design-comp-7012/
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[35] https://www.bcit.ca/courses/advanced-algorithms-and-data-structures-design-and-analysis-comp-8042/
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[50] https://www.bcit.ca/outlines/comp8531/
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[52] https://www.bcit.ca/outlines/comp7005/
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[61] https://www.bcit.ca/courses/topics-in-computer-programming-cryptology-comp-7402/
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[81] https://www.bcit.ca/courses/special-topics-in-network-and-security-development-comp-8505/
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[99] https://www.bcit.ca/admission/entrance-requirements/transfer-credit/
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