Vancouver Community College Education Council
Meeting Agenda
May 13, 2025
3:30–5:30 p.m. Videoconference
https://vcc.zoom.us/j/65966520709

	Topic	Action	Speaker	Time	Attachment	Page
1.	**CALL TO ORDER**		L. Dannhauer			
2.	**ACKNOWLEDGEMENT**		D. McMullen			
3.	**ADOPT AGENDA**	Approval	L. Dannhauer	1 min	✓	**1-2**
4.	**APPROVE PAST MINUTES**	Approval	L. Dannhauer	1 min	✓	**3-8**
5.	**ENQUIRIES & CORRESPONDENCE**	Info	L. Dannhauer	1 min		
6.	**BUSINESS ARISING**					
	a. Annual Deans' & Directors' Presentations – Part 5	Info	J. Williams, D. Kirk	20 min		
	b. Affiliation Agreements – Annual Update	Info	D. Wells	10 min	*distributed separately via email*	
	c. Generative AI – Discussion	Discussion	TBC	15 min		
	d. Academic Year 2025/26, 2026/27, 2027/28	Approval	D. McMullen	5 min	✓	**9-12**
	e. Continuing Studies Non-Credit Course Outlines	Info	C. Sauvé	5 min	✓	**13-14**
	f. EdCo Planning Day	Info	L. Dannhauer	2 min		
7.	**COMMITTEE REPORTS**					
	a. Curriculum Committee					
	i. Program Update: Sign Language Interpretation Diploma	Approval	B. Mykle-Hotzon, K. Hagemoen	5 min	✓	**15-25**
	ii. Program Update: Computer Systems Technology Diploma	Approval	X. Liu, R. Nezami	5 min	✓	**26-125**
	iii. New Program: Virtual Environment and Simulation Design Diploma	Approval	B. Griffiths	10 min	✓	**126-206**

	Topic	Action	Speaker	Time	Attachment	Page
	iv. Final Program Approval: Electronics Repair Technology Diploma	Approval	T. Rowlatt	5 min	✓	**207-208**
	v. Course Deactivations	Approval	T. Rowlatt	2 min	✓	**209**
	b. Policy Committee	Info	L. Dannhauer	5 min		
	c. Education Quality Committee	Info	L. Dannhauer	5 min		
8.	**CHAIR REPORT**	Info	L. Dannhauer	5 min		
9.	**STUDENT REPORT**	Info	M. Ng	5 min		
10.	**NEXT MEETING & ADJOURNMENT**	Info	L. Dannhauer	1 min		
	Next meeting: June 10, 2025, 3:30–5:30 p.m. EdCo Planning Day: June 17, 2025, 9:00 a.m. – 12 p.m.					

VANCOUVER COMMUNITY COLLEGE EDUCATION COUNCIL
DRAFT – MEETING MINUTES
April 8, 2025
3:30–5:30 p.m., Videoconference

ATTENDANCE

Education Council Members		
Natasha Mandryk (Chair)	Dennis Innes	Rahul Ranwa
Louise Dannhauer (Vice-Chair)	Emily Logan	Shirley Lew
Andy Sellwood	Emily Simpson	Stephanie Callaghan
Brianna Higgins	Lisa Beveridge	Todd Rowlatt
Dave McMullen	Marcus Ng	Vivian Munroe
David Wells	Nafiseh Tohidi	
Regrets		
Anik Joy Varghese	Kseniia Osipova	Poorna Karthikeya Balachandar
David Kirk		
Guests		
Adrian Lipsett	Dawn Cunningham Hall	Melissa Chirino
Cateno Vassallo	Emmanouil Daskalakis	Michael Coard
Claire Sauvé	Gary Mui	Nigel Scott
Clay Little	Hal Saxby	Rosie Gosling
Clayton Munro	Jennifer Kelly	Sheri Wiwchar
Dave Stevenson	Lucy Griffith	Taryn Thomson
Recording Secretary		
Darija Rabadzija		

1. CALL TO ORDER

- The meeting was called to order at 3:30

2. ACKNOWLEDGEMENT

- S. Callaghan acknowledged the College's location on the traditional unceded territories of the xʷməθkʷəy̓ əm (Musqueam), Sḵwx̱ wú7mesh (Squamish), and səl̓ilw̓ ətaʔɬ (Tsleil-Waututh) peoples who have been stewards of this land from time immemorial and extended the acknowledgement to the ancestral territories of all participants joining remotely.

3. ADOPT AGENDA

MOTION: THAT Education Council adopt the April 8, 2025 agenda as amended. D. Kirk's annual dean's presentation was postponed.

Moved by N. Mandryk, Seconded & CARRIED (Unanimously)

4. APPROVE PAST MINUTES

MOTION: THAT Education Council approves the March 11, 2025 minutes as presented.

Moved by N. Mandryk, Seconded & CARRIED (Unanimously)

5. ENQUIRIES & CORRESPONDENCE

- T. Thomson inquired about faculty lay-offs in the context of the recently approved enrolment plan. Some reductions were the result of the closure of the Language Instruction for Newcomers (LINC) department due to the loss of funding, and lower international enrolment following IRCC policy

changes. Other reductions occurred in areas with increased or stable projections in the enrolment plan, such as ABE Youth, Humanities and Culinary Arts. 4

- D. Wells explained that projected registrations are utilized for budgeting purposes, but as actual registrations may not meet projections, these numbers are not directly tied to faculty contingents.
- Adult Basic Education (ABE) has been undergoing reorganization to create an ABE Hub. For this reason, the number of faculty in Humanities and ABE Youth has not been adjusted in line with updated enrolment numbers over the last few years, until now. Culinary Arts programs are taught in blended domestic and international cohorts, and IRCC policy changes have introduced uncertainty around international enrolment. Once there is more certainty around fall enrolment numbers, the College will be in a better position to plan for the required number of cohorts and faculty support.
- It was suggested to continue discussing the enrolment plan at a future meeting.

6. BUSINESS ARISING

a) Education Service Renewal Report & Institutional Response: Student Conduct & Judicial Affairs Office

- D. Stevenson presented the Education Service Renewal Report for the Student Conduct & Judicial Affairs Office (SCJAO). C. Munro provided the institutional response, as outlined in policy 405 Education Services Renewal.
- Renewal findings included a growing caseload, increased focus on academic integrity issues, and growing complexity of student needs. The office will work on increasing awareness of its work and College policies, as well as differentiation between the SCJAO and Arbiter of Student Issues Office. Operational improvements will include a new database to support records management.
- There was a discussion about resourcing of this office, as well as work around academic integrity at the College overall.
- R. Ranwa left the meeting at 4:00 p.m.

b) Education Service Renewal Report & Institutional Response: Disability Services

- S. Wiwchar and B. Higgins D. Stevenson presented the Education Service Renewal Report for Disability Services. C. Munro provided the institutional response, as outlined in policy 405 Education Services Renewal.
- Based on renewal findings, the department's action plan focuses on decolonization, Indigenization and reconciliation, including through strengthening relationships with Indigenous Education and Community Engagement; increasing utilization of clockwork software to streamline processes; and raising awareness of disability issues.
- There was a discussion about considerations to change the department name, which will require broad consultation. Members raised questions around processes for accommodations in work-integrated learning settings. This topic will be brought back for discussion.

c) Annual Deans' & Directors' Presentations – Part 4

- L. Griffith provided the annual dean's update on the School of Trades, Technology & Design. There are plans to modernize trades training to improve student access to apprenticeships and Red Seal certification. Redesigned apprenticeships are envisioned to consist of 10 months of foundational training at VCC, followed by training in industry, complemented by continued regular sessions at VCC to provide support and mentorship.

d) Strategic Innovation Plan (SIP) – Academic Update

- D. Wells provided an update on academic innovation initiatives in the 2022–2025 Strategic Innovation Plan (SIP), which is structured around five priorities: academic innovation; campuses of the future;

empowered people and inclusive culture; engaged communities; and operational excellence. The 2024 Accomplishments Report was recently released and outlines SIP objectives completed in 2024, as well as accomplishments that support its priorities but were not part of the initial plan.

- Emerging topics in academic innovation include rapid development of new programs, prior learning assessment and recognition (PLAR) and assessment-based credentials, modernized apprenticeships, and simulation.
- As the timeline of the initial SIP is coming to a close, a SIP refresh is being planned. There was a discussion about the process and the level of consultation and involvement of the College community.

e) Duolingo Test Recalibration

MOTION: THAT Education Council approves the revised Duolingo scores for placement into EAL/ESL Pathways courses.

Moved by N. Mandryk, Seconded & CARRIED (Unanimously)

- D. McMullen presented the proposal. Since 2020, the Duolingo English Test has been one option for students at VCC to have their English language proficiency assessed. In 2021, the Duolingo minimum scores were recalibrated based on the recommendations of faculty, a review of other institutions' policies, and an evaluation of student outcomes. Minimum scores required for entrance into EAL/ESL Pathways courses were adjusted at that time. Pathways courses typically combine the skills of listening and speaking (LS) or reading and writing (RW).
- In July 2024, Duolingo expanded the score report to include single scores in each of the four skills: listening, speaking, reading, and writing. This provides a more accurate reflection of an individual's skills, which can lead to more accurate placement in skills-based courses. Based on an examination of 32 students' test scores and outcomes in Pathways courses, the proposal is to adjust the minimum required placement scores. This proposal is supported by faculty in the Assessment Centre and EAL Pathways. There are currently no considerations to utilize single-skill scoring for other programs.

f) Concept Paper: Construction Electrician Foundation Certificate

- L. Griffith presented the concept paper for the new Construction Electrician Foundation Certificate program, planned for January 2026. This program will focus on electrical theory, electrical code requirements, wiring methods, and safety practices essential for careers in the field. The program can be delivered at either the Downtown or Broadway campus, and the plan is to include hands-on training on the construction site of VCC's new Centre for Clean Energy and Automotive Innovation.
- There was a discussion about resource and space requirements. The program does not require a large footprint or capital expenses and can be delivered in classrooms, as the units students will be working on are quite contained. VCC is well positioned to deliver this training due to its strong industry partnerships, and there is high student demand, with waitlists at other institutions.
- There are some connections to existing and future programs in the School of Trades, Technology and Design, including in Electronics Repair and Wind Turbine Maintenance. There were some questions about labour market demand for construction electricians; L. Griffith will follow up. Members discussed gender equity considerations and the importance of suitable tools and equipment.

7. COMMITTEE REPORTS

a) Curriculum Committee

i) New Course: MATH 1001 & Course Update: MATH 1100

MOTION: THAT Education Council approve, in the form presented at this meeting, the new course MATH 1001 Calculus Connections Lab and revisions to MATH 1100 Calculus 1, and recommend the Board of Governors approve the creation of MATH 1001.

Moved by T. Rowlatt, Seconded & CARRIED (Unanimously)

- L. Dannhauer took over the chair during discussion of item 7ai. N. Mandryk presented the proposal for new course MATH 1001 and related updates to pre-requisites for MATH 1100. First-year calculus courses have low success rates despite the high MATH 1100 pre-requisite of a B in Pre-Calculus 12. The high pre-requisite creates a barrier to entry, while not adequately improving the likelihood of student success in MATH 1100.
- Following a co-requisite remediation model, the department is proposing the new support course MATH 1001 to accompany MATH 1100. Students with a 'C' or higher in Pre-Calculus 12 can take MATH 1100 and 1001 concurrently. MATH 1001 reviews pre-calculus concepts and problem-solving in a calculus context, allowing "just-in-time" review and a focus on reorganizing pre-calculus knowledge.
- The Registrar's Office had concerns that the inclusion of MATH 1001 as part of the pre-requisite for MATH 1100 could affect VCC's transfer and articulation agreements for MATH 1100. Following further discussion with the department, these concerns were addressed. It was agreed to update the pre-requisite wording slightly to "Pre-Calculus 12 with a 'B' grade, or equivalent (completion within the last five years or concurrent registration in MATH 1001 is recommended); or Pre-Calculus 12 with a 'C' grade and concurrent registration in MATH 1001."

ii) Program Update: Building Manager Short Certificate

MOTION: THAT Education Council approve, in the form presented at this meeting, revisions to the Building Manager Short Certificate program content guide.

Moved by T. Rowlatt, Seconded & CARRIED (Unanimously)

- H. Saxby presented the proposal to adjust the course list in the Building Manager Short Certificate program. Instead of having to complete BLDG 1201 Contract Law in the Built Environment, students will have the choice between this course and BLDG 1206 Introduction to Building Operations and Risk Management. Continuing Studies has a partnership with the Aboriginal Community Career Employment Services Society (ACCESS) and the Vancouver Aboriginal Friendship Centre Society, and the partner organizations recommended this change.
- It was noted that this 8-credit program does not comply with the updated Granting of Credentials policy, which generally requires a minimum of 9 credits for a short certificate. There were no changes to credits at this time, but this question will be revisited during the upcoming program renewal. Curriculum Committee and Education Council had no concerns about this approach.

iii) Program Update: Graphic Design Diploma

MOTION: THAT Education Council approve, in the form presented at this meeting, revisions to the admission requirements in the Graphic Design Diploma program content guide.

Moved by T. Rowlatt, Seconded & CARRIED (Unanimously)

- T. Rowlatt presented the proposal on behalf of S. Albert. The department would like to remove the interview and portfolio requirement for first-year admission (but not advanced entry) to the program. This requirement presents a significant barrier to ensuring a diverse student population, especially for high school students or other applicants who may not have a portfolio to submit. An environmental scan showed that similar programs at other institutions do not require portfolios. Following the Curriculum Committee meeting, the proposal was updated to also remove the letter of intent and resumé requirement.
- Curriculum Committee discussed potential impacts on student success, with removal of the portfolio as a means to gauge student interest and existing skills in this creative field. The department felt that the first term provides the fundamental skills students need to succeed. Outcomes will be monitored over the next year to evaluate if adjustments are needed.

iv) Program Update: High Performance and Custom Engine Technician Diploma

MOTION: THAT Education Council approve, in the form presented at this meeting, revisions to the program content guide for the High Performance and Custom Engine Technician Diploma and 17 new courses.

Moved by T. Rowlatt, Seconded & CARRIED (Unanimously)

- G. Mui and M. Coard presented revisions to the High Performance and Custom Engine Technician Diploma, which was recently renamed from Automotive Service Technology Diploma to align with a CIP code that is eligible for post-graduation work permits.
- The proposed updates align the program with the requirements of SkilledTradesBC (STBC) as well as the U.S.-based Automotive Service Excellence (ASE) standards. 17 new course outlines were created to update course numbers and credits. There were some enhancements to content to better reflect the high-performance focus and ASE requirements.
- Curriculum Committee requested small adjustments, which were completed. The effective date was moved to January 2026. Board of Governors approval is not required, since there is no impact on total program contact hours, total credits, or total cost of the program and related courses.

v) Program Update & Name Change: Automotive Logistics and Service Operations - Zero Emission Diploma

MOTION: THAT Education Council approve, in the form presented at this meeting, the revised program content guide for the renamed new Automotive Logistics and Service Operations – Zero Emission Diploma, revisions to six course outlines and three new courses; and recommend the Board of Governors approve the program name change.

Moved by T. Rowlatt, Seconded & CARRIED (Unanimously)

- C. Vasallo and L. Griffith presented the proposal. The Automotive Parts and Service Management Diploma was revised to align with a CIP code that is eligible for post-graduation work permits (CIP 52.0203 - logistics, materials, and supply chain management). This focus on logistics is reflected in the proposed new name for the program, as well as in updated program learning outcomes, revised course outlines and three new courses. The program is part of the suite of offerings connected to VCC's future Centre for Clean Energy and Automotive Innovation. The curriculum covers both traditional technology and use of zero-emission technology in logistics.
- Curriculum Committee had a longer discussion about the inclusion of "zero emission" in the program name and requested some edits to more explicitly embed zero emission logistics in the curriculum documentation. This conversation continued at Education Council.
- Members requested some additional adjustments to the program purpose and program learning outcomes to clarify that "zero emission" refers to both handling of electric vehicle (EV) parts, as well as the focus on zero emission/environmentally sustainable logistics and supply chain processes and decision-making.
- It was also suggested to review the alignment of evaluation plans in the management-focused courses (APSM 2107, 2204, 2206) to reflect the higher level of learning outcomes in these courses.

b) Policy Committee

- L. Dannhauer reported that a number of educational policies are up for review. Efforts are underway to prioritize policies for review and determine next steps.

c) Education Quality Committee

i) Curriculum Development (CD) Fund 2025–26

- L. Dannhauer reported that a total of $400,000 in curriculum development funding was allocated to 28 projects. There was a diverse range of proposals, including for course redevelopment, new programs, micro-credentials, decolonization efforts, and cross-departmental collaborations.

ii) Program Renewal Report & Action Plan: Music Degree & Diploma

- E. Logan presented the renewal report and resulting action plan for the Music Degree and Diploma programs. A key recommendation from the renewal was to create a combined four-year program.

8. CHAIR REPORT

- N. Mandryk reported that the planned launch date for the significantly revised Dental Hygiene Diploma program was moved from September 2025 to September 2026, pending Board of Governors of approval.

9. STUDENT REPORT

- M. Ng reported on SUVCC's recent carnival events to celebrate the end of term.

10. NEXT MEETING AND ADJOURNMENT

- The next Education Council meeting will be held on May 13, 2025, 3:30–5:30 p.m.
- The meeting was adjourned at 5:40 p.m.

Natasha Mandryk
Chair, VCC Education Council

DECISION NOTE

PREPARED FOR: Education Council

DATE: May 13, 2025

ISSUE: Academic Year 2025/2026, 2026/2027, and 2027/2028

BACKGROUND:

The Academic Year schedule supports the coordination of academic and campus activities and operation of the Registrar's Office. It includes public holidays and College closures, term dates, and grade submission deadlines.

It should be noted that the Fall 2027 semester, as proposed, is shorter than usual at 68 instructional days due to a late Labour Day that year (Sept 6, 2027). However, this would still be one additional day compared to the Fall 2026 semester instructional days. By comparison though, the Fall 2025 semester has 71 instructional days and the Winter 2028 semester, as proposed, has 72 days. Fall semester includes four stat holidays and VCC Day, which are not counted in the instructional days.

DISCUSSION:
As was done last year, these proposed academic dates do not include a set exam period. This is in recognition of the various ways that exams are delivered in different programs and how there are many programs that do not include an exam and therefore may continue to schedule classes through what would traditionally be considered an exam period. Due to this variability, these academic dates include a "Last Day of Class/Exams", which would then be applicable to more VCC programs.

RECOMMENDATION:
THAT Education Council recommends the Board of Governors approve, in the form presented at this meeting, the Academic Year 2025/2026, 2026/2027, and 2027/28.

PREPARED BY: Dave McMullen, Registrar

DATE: May 6, 2025

Academic Year Information

Note: Some vocational and/or trades programs may start or end on dates that do not coincide with the semester-based dates below. Please contact the appropriate instructional department for additional information.

Public Holidays and Closures (2025/2026)	
Event	**Date**
Labour Day	Mon, Sep 01, 2025
National Day for Truth and Reconciliation	Tue, Sep 30, 2025
Thanksgiving	Mon, Oct 13, 2025
VCC Day	TBD
Remembrance Day	Tue, Nov 11, 2025
Holiday Closure (TBD)	Tue, Dec 23, 2025 – Mon, Jan 05, 2026
Family Day	Mon, Feb 16, 2026
Good Friday	Fri, Apr 03, 2026
Easter Monday	Mon, Apr 06, 2026
Victoria Day	Mon, May 18, 2026
Canada Day	Wed, Jul 01, 2026
BC Day	Mon, Aug 03, 2026

Term Dates (2025/2026) (For courses running the entire term)			
Term	**Fall**	**Winter**	**Spring/Summer**
First Day of Class	Tue, Sep 02, 2025	Mon, Jan 05, 2026	Mon, May 04, 2026
Last Day of Class/Exams	Mon, Dec 15, 2025	Fri, Apr 17, 2026	Mon, Aug 17, 2026
Grade Submission Deadline	Thu, Dec 18, 2025	Fri, Apr 24, 2026	Mon, Aug 24, 2026

Public Holidays and Closures (2026/2027)	
Event	**Date**
Labour Day	Mon, Sep 07, 2026
National Day for Truth and Reconciliation	Wed, Sep 30, 2026
Thanksgiving	Mon, Oct 12, 2026
VCC Day	TBD
Remembrance Day	Wed, Nov 11, 2026
Holiday Closure (TBD)	Wed, Dec 23, 2026 – Fri, Jan 01, 2027
Family Day	Mon, Feb 15, 2027
Good Friday	Fri, Mar 26, 2027
Easter Monday	Mon, Mar 29, 2027
Victoria Day	Mon, May 24, 2027
Canada Day	Thu, Jul 01, 2027
BC Day	Mon, Aug 02, 2027

Term Dates (2026/2027) (For courses running the entire term)			
Term	**Fall**	**Winter**	**Spring/Summer**
First Day of Class	Tue, Sep 08, 2026	Wed, Jan 06, 2027	Mon, May 03, 2027
Last Day of Class/Exams	Tue, Dec 15, 2026	Tue, Apr 20, 2027	Fri, Aug 20, 2027
Grade Submission Deadline	Fri, Dec 18, 2026	Fri, Apr 23, 2027	Fri, Aug 27, 2027

Public Holidays and Closures (2027/2028)	
Event	**Date**
Labour Day	Mon, Sep 06, 2027
National Day for Truth and Reconciliation	Thu, Sep 30, 2027
Thanksgiving	Mon, Oct 11, 2027
VCC Day	TBD
Remembrance Day	Thu, Nov 11, 2027
Holiday Closure (TBD)	Thu, Dec 23, 2027 – Mon, Jan 03, 2028
Family Day	Mon, Feb 21, 2028
Good Friday	Fri, Apr 14, 2028
Easter Monday	Mon, Apr 17, 2028
Victoria Day	Mon, May 22, 2028
Canada Day	Fri, Jun 30, 2028 (in lieu of Sat, Jul 1)
BC Day	Mon, Aug 07, 2028

Term Dates (2027/2028) (For courses running the entire term)			
Term	**Fall**	**Winter**	**Spring/Summer**
First Day of Class	Tue, Sep 07, 2028	Wed, Jan 05, 2028	Mon, May 01, 2028
Last Day of Class/Exams	Wed, Dec 15, 2027	Tue, Apr 18, 2028	Tue, Aug 15, 2028
Grade Submission Deadline	Fri, Dec 17, 2027	Fri, Apr 21, 2028	Mon, Aug 21, 2028

INFORMATION NOTE

PREPARED FOR: VCC Education Council

DATE: May 13, 2025

ISSUE: Summary of non-credit offerings in CS in 2024

BACKGROUND:
Continuing Studies offers a wide selection of non-credit programming spread across a diverse range of subject areas. As most non-credit offerings are designed to meet the needs of learners pursuing upskilling or personal interest opportunities, these offerings continue to be mostly scheduled in the evenings and on weekends. Continuing Studies has submitted all new and revised course outlines for courses offered in 2024 to the Education Council office, as per policy C.3.14, Curriculum Development and Approval Process. All new and revised course outlines are also in CourseLeaf.

DISCUSSION:
In 2024, 14 new non-credit courses were added into CourseLeaf – a total notably lower than the level of new non-credit course creation in the past few years (31% lower than that of 2023). For the full list, please refer to Appendix A. This lower amount of output is primarily attributed to both the considerable efforts invested from across the team in our credit-bearing offerings (e.g., Fashion and Paralegal program renewals; Cybersecurity GRC launch) as well as a concerted focus on expanding our scope of opportunities for the future (e.g., summer camps; CredX symposium, etc.). Not represented in the attached list are the 21 non-credit offerings that were *deleted* from CourseLeaf – a culling process that we continue to regularly employ as a means of ensuring we remove offerings that have failed to attract sufficient enrolment over a few semesters. Removing such offerings helps our team focus on remaining responsive to emerging needs and opportunities and saves us from expending effort and resources where the ROI has proven negligible or non-existent.

New courses launched in the following areas in 2024:

- Counselling (3)
- Construction (1)
- Business and Leadership (2)
- Fashion (2)
- Misc. (2)
- Base offerings, via CS (4)

Highlights and particularly successful courses include:

- Our LERN/UGotClass asynchronous/online courses continue to see healthy enrolment
- The majority of our non-credit micro-credentials at present seem to be meeting industry/community without providing credit. This seems to be due to the fact that these MCs have been designed to address specific and discrete training needs, thus not requiring stackability options per se. We foresee this changing with some proposed MC developments in

2025 – but it is worth noting that the value of the credit for these offerings is more a factor of what value the credit conveys to the learner, in addition to the competencies.

- We continue to work with the Deans and the RO to explore how CS can best support non-credit Base offerings scheduled through D1

PREPARED BY:
Adrian Lipsett, Dean, Continuing Studies

Appendix A: New CS non-credit courses (2024)

Course Code	Course Name	Approved Date
ARFC 3002	Developing Core Anti-Racist Facilitation Competencies	1/20/2024
ARFC 3003	Anti-racist Micro-facilitation Intensive	1/20/2024
CNSK1602	Foundations of Trauma and Resiliency Informed Practice	10/24/2024
CNSK1603	Care Models and Modalities for Addiction Treatment	10/24/2024
CNSK1604	Addiction Counselling Skills	10/24/2024
CSTR 1101	Inclusive Leadership in Construction and Trades	7/24/2024
CWRI 1175	Advanced Screenplay Writing	4/9/2024
CWRI 1184	Advanced Fiction	7/17/2024
FNFM1105	Film Costuming: On-set and workroom immersion	1/23/2024
FNFM1109	Union Application Sewing	11/25/2024
HLTH 1295	Pharmacology Review	1/25/2024
TEAL 1101	Teaching Essentials for Adult Learners	12/06/2024
TRDE 1122	Occupational First Aid	8/23/2024
TRDE 4001	Automotive Service Technician Refresher Course for Red Seal Certification	3/26/2024

DECISION NOTE

PREPARED FOR: Education Council

DATE: May 13, 2025

ISSUE: Revisions to Sign Language Interpretation Diploma

BACKGROUND:
The ASL & Deaf Studies department is proposing changes to the admission requirements and program learning outcomes (PLOs) for the Sign Language Interpretation (SLI) Diploma program.

At the request of the Registrar's Office, the department is proposing to remove two admission requirements: a letter of reference from a Deaf referee and a short letter of intent. The admission process for SLI is thorough and includes a panel interview that includes a member of the Deaf community.

When the SLI program moved to VCC from Douglas College, the department initially left the Program Learning Outcomes (PLOs) in the style used at Douglas College. The department took the opportunity to update the PLOs to match the style used at VCC. Learning outcomes were broadened and the overall number of outcomes reduced, but these stylistic changes do not affect the substance of the program and learning.

DISCUSSION:
Barbara Mykle-Hotzon, coordinator of the program, presented the proposal. The Committee agreed with the changes to the admission requirements and commended the department for an excellent job re-framing the PLOs.

RECOMMENDATION:
THAT Education Council approve, in the form presented at this meeting, the revisions to the Sign Language Interpretation Diploma program content guide.

PREPARED BY: Todd Rowlatt, Chair, Curriculum Committee

DATE: May 5, 2025

Program Change Request

Date Submitted: 04/03/25 4:43 pm

Viewing: Sign Language Interpretation Diploma

Last approved: 03/04/25 9:50 am

Last edit: 04/15/25 9:28 am

Changes proposed by: bmyklehotzon

Program Name:
Sign Language Interpretation Diploma

Credential Level:	Diploma
Effective Date:	September 2025
Effective Catalog Edition:	2024-2025 Academic Calendar
School/Centre:	Arts & Sciences
Department	Sign Language Studies (1951)

Contact(s)

In Workflow

1. 1951 Leader
2. SAS Dean
3. Curriculum Committee
4. Education Council

Approval Path

1. 04/08/25 11:32 am Maria Klassen (mklassen): Approved for 1951 Leader
2. 04/08/25 2:22 pm Shirley Lew (slew): Approved for SAS Dean
3. 04/17/25 2:59 pm Todd Rowlatt (trowlatt): Approved for Curriculum Committee

History

1. May 19, 2023 by Todd Rowlatt (trowlatt)
2. May 23, 2023 by Darija Rabadzija (drabadzija)
3. Aug 10, 2023 by Darija Rabadzija (drabadzija)
4. Sep 12, 2024 by Barbara Mykle-

Hotzon (bmyklehotzon)
5. Sep 12, 2024 by Darija Rabadzija (drabadzija)
6. Feb 23, 2025 by Barbara Mykle-Hotzon (bmyklehotzon)
7. Mar 4, 2025 by Darija Rabadzija (drabadzija)

Name	E-mail	Phone/Ext.
Shirley Lew	slew@vcc.ca	/
Barb Mykle-Hotzon	bmyklehotzon@vcc.ca	/604-308-0197

Program Content Guide

Purpose

As Deaf individuals increasingly access education, career and community services, the demand for Sign Language Interpreters is growing across the country. If you are skilled in American Sign Language (ASL), the Diploma in Sign Language Interpretation will prepare you for a dynamic career in a rapidly expanding field.
You will learn how to facilitate communication between hearing people and Deaf or hard of hearing people in a variety of settings. Upon program completion you will be able to provide meaning-based interpretation, to communicate well in ASL and in spoken English, to understand and adhere to Deaf cultural norms when required, to act ethically, to work collaboratively with others, and to use appropriate business skills.
This sign language interpreter program emphasizes practical experience and community work, giving you many opportunities to practice what you are learning. You will complete three one-month practicum placements during your final term, where you will be mentored by professional interpreters in their work settings.

Admission Requirements

Admission to the Sign Language Interpretation Diploma program is through a competitive selection process. Throughout the selection process, applicants are assessed for proficiency in American Sign Language (ASL) and English, an understanding of the Deaf community, Deaf culture, the field of Sign Language interpreting, and knowledge of social justice issues.

Admission Requirements

ENGL 1100 with a minimum 'B' grade, or equivalent

An ASL and Deaf Studies Certificate, or equivalent, or permission of the department

~~One letter of reference from a Deaf referee~~

~~Letter of intent (250-500 words) clearly listing reasons for pursuing the diploma~~

Submission of a CASPer test score. CASPer test scores are valid for one admission cycle.

Successful ASL panel interview including a faculty member, Deaf community member, and professional interpreter

Upon Acceptance to the Program

Criminal Record Check

Students in this program are required to complete a CRC. The CRC must be completed according to VCC's Criminal Record Check instructions. Students whose CRC results indicate they pose a risk to vulnerable populations will not be able to complete the requirements of the program (e.g. practicums) or graduate.

Prior Learning Assessment & Recognition (PLAR)

Students may request formal recognition of prior learning attained through informal education, work, or other life experience, including Indigenous ways of knowing. Credits may be granted to students who are able to sufficiently demonstrate the learning outcomes of specific courses.

PLAR is available for the following courses:

INTR 3140 Interpretation Theory and Practice 4

INTR 3150 Advanced American Sign Language for Interpreters

Methods of PLAR vary by course, and may include exams, professional portfolios, interviews, performance assessments, and other evaluations.

If PLAR is successful, transcripts will reflect an 'S' grade (satisfactorily completed), which is not included in grade point average (GPA) calculations.

See Policy 316 Prior Learning Assessment and Recognition for more information.

Program Duration & Maximum Time for Completion

The program is taught full-time over two years. The maximum time for completion is five years.

Program Learning Outcomes

	Upon successful completion of this program, graduates will be able to:
PLO #1	Construct and convey meaning via the interpreting process by applying comprehensive linguistic, cultural, and functional analysis in various communication settings.
PLO #2	Effectively monitor, assess and critique the quality of an interpretation, engaging with feedback and adjusting as needed.
PLO #3	Make appropriate decisions regarding the use of simultaneous and/or consecutive interpreting modes and the use of interaction management strategies.
PLO #4	Demonstrate fluency and versatility in American Sign Language across different topics, registers, and communication settings.
PLO #5	Comprehend and effectively produce spoken and written English within a variety of contexts and types of discourse.
PLO #6	Interact respectfully within the Deaf and Deaf-Blind communities, exhibiting cultural competence, reciprocity, and an understanding of Deaf identities and organizations.
PLO #7	Demonstrate allyship and an awareness of positionality, power, and the systemic effects of audism.
PLO #8	Use effective strategies and apply an awareness of self to managing stress and maintaining wellness.
PLO #9	Demonstrate professionalism, teamwork, and effective communication in diverse interpreting contexts, adhering to standards in the field.
PLO #10	Apply ethical principles, professional guidelines, and critical thinking to uphold integrity and accountability in interpreting practice.
PLO #11	Engage in ongoing professional development, reflective practice, and active contribution to the interpreting community of practice.

Graduates of the Program of Sign Language Interpretation will be able to demonstrate: Meaning-based Interpreting; Versatility in ASL; Versatility in English; Cultural Competence in Deafhood; Awareness of Self and Positionality; Professional Communication and Collaboration; Ethical Decision Making; and Commitment to Learning and Growth.

Meaning-based Interpreting – *The INTR graduate is able to:*

Apply a cognitive model of interpreting in which the interpreter actively constructs meaning based on cues provided by others

Identify the goals of the setting and of each speaker/signer

Attend to the source message, screening out external distractions (e.g. auditory or visual noise) and internal distractions (e.g. fatigue or personal disagreement)

Analyze the source message, considering contextual, cultural, linguistic and paralinguistic factors

Identify content that is explicitly stated and/or implied as well as the intent and affective components

Drop source language form and construct meaning

Create a target language message, applying contextual, cultural, linguistic and paralinguistic features of the target language

Produce a target language message that conveys the constructed meaning and intent, maintaining the cohesiveness of the interpreted discourse

Monitor one's own interpreting performance and make corrections as needed

Use effective interaction management strategies such as deciding when/how to interject

Make appropriate decisions regarding the use of consecutive and/or simultaneous interpreting modes

Co-interpret effectively during teamed interpreting assignments

Adapt signed message output across the spectrum of ASL and Contact Sign Varieties in order to meet the linguistic needs of a variety of consumers

Critically analyze the effectiveness of interpretations by self and others

Demonstrate knowledge of interpretation theories and their implications for the work of interpreters

Versatility in ASL – *The INTR graduate is able to:*

Comprehend and fluently produce grammatically correct ASL discourse on a wide variety of topics and across the range of linguistic registers

Communicate comfortably in ASL with users of all ages

Communicate effectively in ASL in one-on-one exchanges, small interactive groups, and large audience settings

Demonstrate versatility across the visual language spectrum to meet the needs of a variety of D/deaf, hard of hearing, and Deaf-Blind people.

Versatility in English – *The INTR graduate is able to:*

Comprehend and fluently produce grammatically correct English discourse on a wide variety of topics and across the range of linguistic registers

Communicate comfortably in spoken English with users of all ages

Communicate effectively in English in one-on-one exchanges, small interactive groups, and large audience settings

Comprehend and produce written English at a college undergraduate level

Cultural Competence in Deafhood – *The INTR graduate is able to:*

Interact socially in the Deaf community, in a range of contexts and settings, appropriately adhering to norms for social interaction and exhibiting cultural sensitivity

Demonstrate respect for the values, history, traditions and goals of the Deaf community

Interact with individuals who are Deaf-Blind in culturally appropriate ways

Make appropriate decisions about one's own social interactions and language use when in a culturally mixed group of Deaf and non-Deaf people

Apply the value of reciprocity to interactions with the Deaf community

Apply a schema for Deaf-related local, regional, national and international organizations

Demonstrate respect for the diversity of identities, experiences and pathways into Deafhood

Awareness of Self and Positionality – *The INTR graduate is able to:*

Recognize one's own intersectionality, power, privilege and potential for bias

Apply a schema for the systemic effects of audism on Deaf people's access and inclusion

Exhibit developing allyship, working collectively in support of the Deaf community's goals

Use effective strategies for maintaining wellness and balance in one's own physical, mental, emotional and spiritual health

Use effective time management strategies

Recognize stress and implement effective strategies to manage it

Be aware of and respectful of one's own limitations and needs

Establish effective personal and professional support networks

Professional Communication and Collaboration – *The INTR graduate is able to:*

Use effective, respectful and timely interpersonal communication strategies

Be well prepared, reliable and on time

Seek out and utilize preparation resources for interpreting assignments

Present self with professional demeanour and attire appropriate for the setting

Understand power dynamics in professional relationships and work effectively within systems

Engage in constructive feedback discussions, pre/post-brief consultations, and shared analyses

Contribute positively to effective teamwork

Follow standards of practice related to negotiating fees and contracts, self-marketing, invoicing and accounting

Communicate effectively in standard written business English

Use social media in a judicious and responsible manner

Ethical Decision Making – *The INTR graduate is able to:*

Apply the values and guiding principles of the *Code of Ethics and Guidelines for Professional Conduct* of the Westcoast Association of Visual Language Interpreters (WAVLI) and Canadian Association of Sign Language Interpreters (CASLI)

Understand and uphold Occupational Title Protection and its purpose(s)

Apply effective decision-making processes consistent with theoretical models

Apply relevant laws, regulations and workplace policies to professional decisions

Think critically, act responsibly and be accountable when making decisions

Actively honour diversity and respect the autonomy of others

Act professionally in relationships with consumers, colleagues and others, maintaining appropriate boundaries

Articulate a personalized professional philosophy related to working as an interpreter

Demonstrate conscientiousness in managing the power inherent in the role of an interpreter

Commitment to Learning and Growth – *The INTR graduate is able to:*

Reflect regularly on one's own practice and professional development

~~Set practical goals for continuing to build interpreting skills and achieve higher credentials~~
~~Outline a personal plan for ongoing education and growth as a socially conscious interpreter~~
~~Seek learning opportunities and feedback from consumers, mentors and peers~~
~~Maintain membership in interpreting associations and contribute actively to the professional community of practice~~

Instructional Strategies, Design, and Delivery Mode

This program provides high quality instruction, unique curriculum and varied learning activities. Key features of the program include Deaf community involvement and one full term of practicum. Students are required to complete volunteer hours, immersion activities in the Deaf community (for example, camps lasting several days) and supervised work placements.
Course topics in the program include interpreting theory and practice, advanced ASL, service learning, allyship and positionality, Deafhood, professional ethics and standards of practice, among others.
In summary, the interpreting program consists of the following:
Year One:
Fall term with full course load plus service learning in the community.
Winter term with full course load plus volunteer interpreting in the community.
Summer term (May & June) includes two courses plus continued community involvement.
Year Two:
Fall term with full course load plus volunteer interpreting in the community.
Winter/spring term (Jan to May) including three 4-week practicum placements.
Capstone week – submission of portfolio and demonstrations of readiness to graduate.

Evaluation of Student Learning

Students are evaluated on their performance on practical assignments, special projects, written assignments, oral presentations, and tests.
Before graduation, students will demonstrate the skills and readiness to enter the interpreting field by compiling a capstone portfolio showcasing their achievements. During a capstone week at the end of the program, students will perform interpretations and presentations, and be assessed by members of the Deaf community, professional interpreters and program faculty.
Students must have a minimum grade point average of 'B+' (3.33) or a grade of ‘S’ to successfully complete each course, and a minimum program term grade point average of 3.33 or department permission to progress into subsequent terms. Students must have a minimum cumulative grade point average of 3.33 and a grade of ‘S’ in each of the practicum courses to graduate.

Recommended Characteristics of Students

Excellent interpersonal skills and ability to communicate assertively
Ability to mentally process information very quickly
Fluency and versatility in ASL and English (spoken and written)
Empathy and respect for people of diverse identities and experiences
Awareness of your positionality, power and privilege
Flexibility and adaptability
Self-care strategies for maintaining physical, mental and emotional health
Determination, perseverance and ability to follow through

Courses

Plan of Study Grid

First Year		Credits
INTR 2100	Positionality in the Deaf Community	2.5
INTR 2120	Foundations of Practice 1	3
INTR 2140	Interpretation Theory and Practice 1: Translation	3
INTR 2150	Deaf Community Service Learning 1	2.5
ASLD 2180	American Sign Language Level 8	3
INTR 2210	Ethics & Professional Decision Making	2.5
INTR 2220	Foundations of Practice 2	2
INTR 2240	Interpretation Theory and Practice 2	3
INTR 2250	Deaf Community Service Learning 2	2.5
INTR 2260	Deafhood: Pathways to Identity & Diversity	2.5
ASLD 2290	American Sign Language Level 9	3
INTR 2340	Interpretation Theory and Practice 3: Community	3
ASLD 2310	American Sign Language Level 10	3
	Credits	35.5
Second Year		
INTR 3110	Self and Community of Practice	3
INTR 3120	Sign Language Interpretation in Educational Settings	3
INTR 3140	Interpretation Theory and Practice 4	5
INTR 3150	Advanced American Sign Language for Interpreters	3
INTR 3210	Sign Language Interpreting Practicum Readiness	1.5
INTR 3220	Sign Language Interpreting Practicum 1	4.5
INTR 3230	Sign Language Interpreting Practicum 2	4.5
	Credits	24.5
	Total Credits	60

The evaluation of learning outcomes for each student is prepared by the instructor and reported to the Student Records Department at the completion of semesters.
The transcript typically shows a letter grade for each course. The grade point equivalent for a course is obtained from letter grades as follows:

Grading Standard

Grade	Percentage	Description	Grade Point Equivalency
A+	90-100		4.33
A	85-89		4.00
A-	80-84		3.67
B+	76-79	Minimum Progression Grade	3.33
B	72-75		3.00
B-	68-71		2.67
C+	64-67		2.33
C	60-63		2.00
C-	55-59		1.67
D	50-54		1.00
F	0-49	Failing grade	0.00
S	76 or greater	Satisfactory – student has met and mastered a clearly defined body of skills and performances to required standards	N/A
U		Unsatisfactory – student has not met and mastered a clearly defined body of skills and performances to required standards	N/A
I		Incomplete	N/A
IP		Course in Progress	N/A
W		Withdrawal	N/A
Course Standings			
R		Audit. No Credit	N/A
EX		Exempt. Credit Granted	N/A
TC		Transfer Credit	N/A

Grade Point Average (GPA)

The course grade points shall be calculated as the product of the course credit value and the grade value.
The GPA shall be calculated by dividing the total number of achieved course grade points by the total number of assigned course credit values. This cumulative GPA shall be determined and stated on the Transcript at the end of each Program level or semester.
Grades shall be assigned to repeated courses in the same manner as courses taken only once. For the purpose of GPA calculation of grades for repeated courses, they will be included in the calculation of the cumulative GPA

calculation of grades for repeated courses, they will be included in the calculation of the cumulative GPA. 25

Rationale and Consultations

Provide a rationale
for this proposal.

In an attempt to streamline our admission requirements we are removing the need for a letter of reference or letter of intent. The original purpose for these two items was to get to know the applicant better but we believe this can be accomplished through the applicant interview process.

When the program outcomes were first entered into CourseLeaf during our transition from Douglas College, the same wording was used but these changes to the wording of the program outcomes aligns them better with VCC's standard wording.

Are there any
expected costs to
this proposal.

None.

Consultations

Consultated Area	Consultation Comments
Registrar's Office	Recommended decreasing number of admission requirements.

Additional Information

Provide any additional information if necessary.

Supporting
documentation:

Marketing Information

FOR MARKETING PURPOSES ONLY. DO NOT EDIT.
These fields are NOT required for governance approval. The wording in these fields is written by Marketing for a specific purpose and must be consistent with all other College publications. If changes are needed, contact webmaster@vcc.ca.

This program is for:

Marketing Description

Learn to become a sign language interpreter. Facilitate the communication between hearing and Deaf and hard of hearing communities using American Sign Language (ASL).

DECISION NOTE

PREPARED FOR: Education Council

DATE: May 13, 2025

ISSUE: Revisions to Computer Systems Technology Diploma

BACKGROUND:
The Computer Systems Technology (CST) department is proposing revisions to the diploma program, including 6 revised and 14 new course outlines. The revisions focus the program on web and mobile application development and shorten the program from 76 credits to 60 credits, aligning program length with similar offerings at other institutions.

Extensive changes have been made to the curriculum, including simplifying the program learning outcomes, updating the program purpose, and providing options for prior learning assessment and recognition (PLAR). Courses have been re-structured and re-organized while maintaining the core content of the program. Courses on AI technologies, UI/UX development and computer security remain, as these are key skills for junior developers entering the workforce.

DISCUSSION:
Xing Liu, department head of the program, and Reza Nezami, instructor and former department head, presented the proposal. The Committee had no major concerns. A number of smaller edits were requested, included re-wording course descriptions, clarifying course learning outcomes, and identifying multi-stage projects within the evaluation plans. Instructional Associates from the CTLR worked with the department to make additional revisions to this curriculum.

RECOMMENDATION:
THAT Education Council approve, in the form presented at this meeting, the revised program content guide for the Computer Systems Technology Diploma program, 6 revised and 14 new course outlines, and recommend the Board of Governors approve the new courses and reduction in credits for the diploma.

PREPARED BY: Todd Rowlatt, Chair, Curriculum Committee

DATE: May 5, 2025

Program Change Request

Date Submitted: 04/03/25 1:16 pm

Viewing: Computer Systems Technology Diploma

Last approved: 12/02/24 2:17 pm

Last edit: 05/05/25 4:51 pm

Changes proposed by: xliu

Catalog Pages Using this Program

Computer Systems Technology Diploma

Program Name:
Computer Systems Technology Diploma

Credential Level:	Diploma
Effective Date:	September 2026 ~~2025~~
Effective Catalog Edition:	2024-2025 Academic Calendar
School/Centre:	Trades, Technology & Design
Department	Computer Systems Technology (4702)

Contact(s)

In Workflow

1. **4702 Leader**
2. **CTT Dean**
3. **Curriculum Committee**
4. **Education Council**
5. Ministry Review
6. Board of Governors

Approval Path

1. 04/03/25 1:20 pm Xing Liu (xliu): Approved for 4702 Leader
2. 04/04/25 10:30 am Lucy Griffith (lgriffith): Approved for CTT Dean
3. 05/06/25 11:29 am Todd Rowlatt (trowlatt): Approved for Curriculum Committee

History

1. Jun 18, 2018 by cdeans
2. Jun 17, 2019 by Reza Nezami (rnezami)
3. Jun 18, 2019 by Todd Rowlatt (trowlatt)
4. Aug 6, 2019 by Todd Rowlatt (trowlatt)

5. Aug 21, 2019 by Nicole Degagne (ndegagne)
6. Mar 11, 2020 by Reza Nezami (rnezami)
7. May 13, 2022 by Reza Nezami (rnezami)
8. Mar 15, 2023 by Leszek Apouchtine (lapouchtine)
9. Mar 22, 2023 by Darija Rabadzija (drabadzija)
10. Nov 13, 2024 by Reza Nezami (rnezami)
11. Nov 13, 2024 by Darija Rabadzija (drabadzija)
12. Dec 2, 2024 by Todd Rowlatt (trowlatt)

Name	E-mail	Phone/Ext.
Xing Liu (Department Head) ~~A. Reza Nezami (Department Head)~~	xliu@vcc.ca ~~rnezami@vcc.ca~~	6046001369 ~~6043188274~~
Reza Nezami	rnezami@vcc.ca	6043188274

Program Content Guide

Purpose

The Computer Systems Technology (CST) Diploma prepares students for careers in software development, specializing in intelligent web, Windows, and mobile applications using modern development tools, including AI-assisted technologies. Graduates can work as junior software developers in various industries, including business, government, healthcare, education, and law enforcement.

The CST Diploma program is designed to provide extensive hands-on learning experiences similar to a real-world industrial software development setting. The focus is on empowering students with a problem-solving mindset and skills in which theory and practice are blended in individual and team projects. Students gain experience in software design, development, testing, and deployment using popular platforms and AI-powered Integrated Development Environments (IDEs). Students learn to research, investigate, analyze, design, implement, test and optimize their solutions. A capstone project course at the end of the program provides students with the opportunity to work on an industry level project. In this course, students learn the systematic methodologies used in software development, ranging from requirements collection, software design and implementation, test and deployment, to project management, documentation and presentation.

The first year builds a strong foundation in computing systems and software design, while the second year covers advanced topics like web and mobile development, UI/UX design, cloud computing, cybersecurity, and AI. CST instructors bring real-world industry experience and strong connections to the local IT sector, helping students prepare for the workforce.

~~The Computer Systems Technology (CST) Diploma program prepares students for a career as a computer systems software technologist specializing in developing web and Windows software applications using the latest development platforms and AI-assisted tools. Computer systems software technologists generate software solutions for the general public, businesses, government agencies, industries, law enforcement agencies, health services providers, educational institutions and more. Graduates will be able to work as junior software developers in these fields.~~

~~Students gain a solid foundation in software design, development, testing, and deployment in popular platforms using the AI-assistance Integrated Development Environment (IDE). The first year of the program focuses on building a strong foundation in computing systems, and in software design and analysis. In the second year of the program, students take advanced courses in web and mobile technologies and intelligent interactive application settings, modern Windows application ecosystem, User Interface and Experience design, Cloud Computing, and Security, as well as in the application of AI and Machine Learning in software solutions. CST instructors are industry-experienced professionals who are strongly connected to the local Information Technology industry.~~

Admission Requirements

Grade 12 graduation or equivalent

English Studies 12 with a minimum 'C' grade, or equivalent

Foundation of Mathematics 11 with a minimum 'C+' grade, or equivalent

Prior Learning Assessment & Recognition (PLAR)

Students may request formal recognition of prior learning attained through informal education, work, or other life experience, including Indigenous ways of knowing. Credits may be granted to students who are able to sufficiently demonstrate the learning outcomes of specific courses.
PLAR is available for the following courses:
CSTP 1101 Communication and Workplace Behaviour
CSTP 1106 Website Development
CSTP 1120 Introduction to Computer Systems
CSTP 1130 Python Programming
CSTP 1150 Applied Mathematics for Programmers
Students may complete up to 50% of the total credits of the program through PLAR and transfer credit. Please see individual course outlines for PLAR details. Tuition and fees apply to PLAR.
Methods for assessing prior learning may include exams, portfolios, interviews, and other evaluations.
If PLAR is successful, transcripts will reflect an 'S' grade (satisfactorily completed), which is not included in grade point average (GPA) calculations.
International Students should contact VCC International Education Advising to learn how PLAR can impact immigration status, prior to proceeding with the PLAR request.
See Prior Learning Assessment and Recognition policy for more information.
~~Prior learning assessment and recognition is not available for this program.~~

Program Duration & Maximum Time for Completion

This program is 2 years of full-time study. A term break is typically scheduled between year 1 and year 2. The maximum time to complete the program is 5 years.
~~The CST diploma program can be completed in 5 terms of full-time study (average 17 credits per term), with an expected completion time of 2 years. There are 3 terms Fall, Winter, and Summer per year. The program must be completed within a maximum of 5 years. The CST program accepts students for Winter and Fall terms.~~

Program Learning Outcomes

	Upon successful completion of this program, graduates will be able to:
PLO #1	Install and configure ~~basic~~ computer hardware and software
PLO #2	Develop software applications for PC, mobile and embedded devices ~~Design, analyze, develop, debug, and optimize web and mobile applications written in popular programming languages such as Python, JavaScript, Java, C++ and C#~~
PLO #3	Create computer software using multiple programming languages ~~Develop and design interactive web pages/mobile apps with multimedia and AI-assisted components~~
PLO #4	Develop intelligent web and mobile applications ~~Design, analyze, and develop complex software application systems for PC, Web, Mobile, and embeded devices~~

	Upon successful completion of this program, graduates will be able to:
PLO #5	Integrate cloud-based services and solutions in software apps ~~Collaborate efficiently in a typical software project team working with popular project development tools and current development frameworks~~
PLO #6	Apply version control and project management skills in software development ~~Evaluate and contribute to the integration of appropriate Cloud-based services and solutions~~
PLO #7	Collaborate and communicate effectively in team-based development environment ~~Explain basic Machine Learning algorithm and contribute to its integration in existing software applications~~
PLO #8	Evaluate and implement new technologies in software development ~~Utilize new tools and technologies independently following the latest trends in software and hardware~~

Additional PLO Information

Instructional Strategies, Design, and Delivery Mode

~~The CST Diploma program is designed to provide a contextual hands-on learning experience similar to a real-world modern software development industry setting. The focus is on developing a problem-solving mindset in which theory and practice are blended in the form of small/large individual or team projects. Students learn to research, investigate, analyze, design, implement and develop, and test and optimize their solutions, similar to the way it works in High Tech and IT companies.~~

The main mode of delivery for the CST program is face-to-face in a lab setting. ~~face-to-face.~~ Instructional strategies include classroom lectures, demonstrations, group discussions, computer labs ~~lab~~ and hands-on practical work, and online sessions.

Students have access to state-of-the-art modern computer labs with software and tools such as ~~VMWare,~~ Visual Studio, Azure Microsoft suite of applications and Operating Systems, web and mobile app development tools, and private department servers. ~~servers, and project-based classroom settings. Individual free tutoring for Math and English Language is provided by VCC.~~

~~It is required that students have access to a modern PC or laptop at home with at least 16GB of Ram and Intel core i5 or higher CPU specification to carry out their assignments or connect to the lab computers remotely. The CST department also has access to multiple Mac labs at the VCC downtown campus, but it is recommended that students have access to a Mac PC (like a Mac Mini) for the Mac/iOS development courses.~~

Evaluation of Student Learning

Students are evaluated through assignments, projects, quizzes and exams (both written and performance-based). ~~Students are evaluated through the completion of assignments and projects, critiques, and quizzes (both written and performance-based), and meeting course project milestones and objectives.~~ Most assignments and projects include the process of initial concept stage, work in progress, and final submissions, which can include reflections and client feedback. Professional skills which ~~conduct (which~~ includes collaboration and teamwork, time management, communication and ~~organization, communication,~~ participation ~~and attendance)~~ will also affect the final grade. ~~grade in each section.~~

Students must have ~~receive~~ a minimum ~~program~~ grade point average of 'C' (2.00) ~~(2.0)~~ to successfully complete each course, ~~graduate,~~ a minimum program term grade point average of 2.00 ~~'C' (2.0)~~ to progress into subsequent courses/terms in the program, ~~successfully complete each course,~~ and a minimum cumulative grade point average of 2.00 upon completion of all courses ~~'C' (2.0) in each term~~ to successfully graduate. ~~advance into subsequent terms in the program.~~

Recommended Characteristics of Students

Extended periods (4+ hours) of computer work requiring sustained visual attention to screens. Tasks require frequent keyboarding and mouse use.

Students are expected to have access to a modern laptop capable of running Microsoft Windows with full privileges. Required hardware consists of at least a quad-core processor and 16GB of RAM and 256GB storage, in order to do their assignments or connect to the lab computers remotely.

Audio/video hardware including webcam/speakers/microphone for participating in classes that have an online delivery mode.

~~Love coding and problem-solving~~

~~Logical and critical thinker~~

~~Able to work long hours on computers~~

~~Ability to work well in a fast-paced, deadline-driven environment~~

~~Research-oriented, curious to use new and intelligent tools in their search~~

~~Client-oriented outlook and ability to work well with a wide variety of people~~

~~Ability to give and receive feedback~~

~~Enthusiastic, positive, optimistic attitude~~

~~Pro-active self-starter~~

~~Basic understanding of computers and comfortable using mobile devices~~

~~Interested in technology, gadgets, and applications that run on them~~

Courses

This full-time program can be completed over four (4) terms by successfully completing the following: 15 credits (term 1), 15 credits (term 2), 14 credits (term 3), 16 credits (term 4).

~~In the First Year students complete the f*oundational/core* courses. In the second year students take advanced software development, web, mobile, and Windows PC specialized courses. In the last term, students focus on developing an industry-scale *Portfolio/Capstone* project as a team.~~

Year 1 (Foundation Courses)		
CSTP 1101	Communication and Workplace Behaviour	3
~~CSTP 1104~~	~~Computer Systems Administration~~	~~5~~
~~CSTP 1105~~	~~Introduction to Programming~~	~~4~~
CSTP 1106	Website Development	3
~~CSTP 1108~~	~~Applied Mathematics~~	~~2~~
~~CSTP 1201~~	~~Introduction to Database Management Systems~~	~~4~~
CSTP 1120	Introduction to Computer Systems	3
CSTP 1130	Python Programming	3
CSTP 1150	Applied Mathematics for Programmers	3
CSTP 1202	Data Communication and Networking	3
~~CSTP 1205~~	~~Programming in C++~~	~~4~~
CSTP 1204	Software Analysis and Design	3
~~CSTP 1302~~	~~Windows Programming~~	~~4~~
~~CSTP 1303~~	~~Introduction to Client-Server Computing~~	~~3~~
~~CSTP 1304~~	~~User Interface Design~~	~~2~~
~~CSTP 1305~~	~~Algorithms Analysis and Data Structures~~	~~3~~
CSTP 1206	Internet Programming and Web Applications	3
CSTP 1210	Database Systems	3
CSTP 1230	C++ Programming	3
Year 2		
CSTP 2104	Windows Interactive Application Programming	3
~~CSTP 2110~~	~~Introduction to Cloud Computing~~	~~3~~
~~CSTP 2106~~	~~Introduction to Computer Security~~	~~3~~
~~CSTP 2107~~	~~Advanced Internet Programming & Web Applications~~	~~4~~
~~CSTP 2108~~	~~Mathematics for Programmers~~	~~2~~
~~CSTP 2204~~	~~IT Development Project~~	~~5~~

~~CSTP 2205~~	~~Android Mobile Application Programming~~	~~3~~
~~CSTP 2208~~	~~Career Path Search~~	~~1~~
~~CSTP 2300~~	~~Emerging AI Technologies~~	~~3~~
~~CSTP 2305~~	~~iOS Mobile Application Development~~	~~3~~
CSTP 2120	Client-Server Computing	3
CSTP 2130	AI Technologies	3
CSTP 2140	Algorithms and Data Structures	3
CSTP 2150	UI/UX Development	2
CSTP 2210	Cloud Computing	3
CSTP 2220	Computer Security	3
CSTP 2230	Advanced Web Application Development	3
CSTP 2240	Capstone Software Development Project	4
CSTP 2250	Android Mobile Application Development	3
Total Credits		60

This guide is intended as a general guideline only. The college reserves the right to make changes as appropriate.

The evaluation of learning outcomes for each student is prepared by the instructor and reported to the Student Records Department at the completion of semesters.
The transcript typically shows a letter grade as a grade for each course. The grade point equivalent for a course is obtained from letter grades as follows:

Grading Standard

Grade	Percentage	Description	Grade Point Equivalency
A+	96-100		4.33
A	91-95		4.00
A-	86-90		3.67
B+	81-85		3.33
B	76-80		3.00
B-	71-75		2.67
C+	66-70		2.33
C	61-65	Minimum Progression	2.00
C-	56-60		1.67
D	50-55		1.00
F	0-49	Failing Grade	0.00
S	70 or greater	Satisfactory – student has met and mastered a clearly defined body of skills and performances to required standards	N/A
U		Unsatisfactory – student has not met and mastered a clearly defined body of skills and performances to required standards	N/A
I		Incomplete	N/A
IP		Course In Progress	N/A
W		Withdrawal	N/A
Course Standings			
R		Audit. No Credit	N/A
EX		Exempt. Credit granted.	N/A
TC		Transfer Credit	N/A

Grade Point Average (GPA)

1. The course grade points shall be calculated as the product of the course credit value and the grade value.
2. The GPA shall be calculated by dividing the total number of achieved course grade points by the total number of assigned course credit values. This cumulative GPA shall be determined and stated on the Transcript at the end of each Program level or semester.
3. Grades shall be assigned to repeated courses in the same manner as courses taken only once. For the purpose of GPA calculation of grades for repeated courses, they will be included in the calculation of the

purpose of GPA calculation of grades for repeated courses, they will be included in the calculation of the cumulative GPA.

Rationale and Consultations

Provide a rationale for this proposal.

This program revision addresses the trends in software development. It enables the program to focus on web and mobile application development. The program requirement and course loads have been aligned with similar programs in local institutions.

The changes will also reduce the total tuition cost of the program.

Are there any expected costs to this proposal.

Consultations

Additional Information

Provide any additional information if necessary.

Supporting documentation:

Marketing Information

FOR MARKETING PURPOSES ONLY. DO NOT EDIT.
These fields are NOT required for governance approval. The wording in these fields is written by Marketing for a specific purpose and must be consistent with all other College publications. If changes are needed, contact webmaster@vcc.ca.

This program is for: Domestic
International

Marketing Description

Build hands-on skills in design and development of intelligent web / mobile / or general sofware applications using AI-assisted tools while launching your career developing software and solving computer-related issues for businesses, governments, or institutions.

Course Change Request

Date Submitted: 04/03/25 1:22 pm

Viewing: CSTP 1101 : Comm & Workplace Behaviour

Last approved: 05/19/22 5:43 am

Last edit: 05/05/25 4:55 pm

Changes proposed by: xliu

Programs referencing this course

122: Computer Systems Technology Diploma

168: Web Development and Design Diploma

Course Name:
Communication and Workplace Behaviour

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Computer Systems Technology (4702)

Contact(s)

In Workflow

1. **4702 Leader**
2. **CTT Dean**
3. **Curriculum Committee**
4. **Education Council**
5. Records
6. Banner

Approval Path

1. 04/03/25 1:23 pm Xing Liu (xliu): Approved for 4702 Leader
2. 04/04/25 10:30 am Lucy Griffith (lgriffith): Approved for CTT Dean
3. 05/06/25 11:29 am Todd Rowlatt (trowlatt): Approved for Curriculum Committee

History

1. Aug 3, 2018 by cdeans
2. Jul 25, 2019 by Reza Nezami (rnezami)
3. May 19, 2022 by Reza Nezami (rnezami)

Name	E-mail	Phone/Ext.
Xing Liu ~~Reza Nezami~~ (Department Head)	xliu@vcc.ca ~~rnezami@vcc.ca~~	6046001369 ~~6043188274~~
Reza Nezami	rnezami@vcc.ca	6043188274

Banner Course Name:	Comm & Workplace Behaviour
Subject Code:	CSTP - Computer Systems Technology
Course Number	1101
Year of Study	1st Year Post-secondary
Credits:	3

Bridge College Code	TT
Bridge Billing Hours	0-3
Bridge Course Level	01

Course Description:

Students learn ~~Learners study~~ human behaviour in organizations and ~~develop the~~ skills needed to deal with people at work. Topics include: individual behaviour, values, interpersonal relationships and communications, groups and team dynamics, organizational culture, leadership, and professional and ethical responsibilities. ~~change.~~

Students study ~~will examine~~ the communication skills required in the workplace, including effective interpersonal communication techniques and conflict resolution. Students learn ~~about~~ practical techniques in business communication, such as writing memos, letters, emails, reports ~~reports,~~ and conducting formal presentations.

Students learn how to communicate with their supervisors, colleagues and clients in various forms. Students become ~~As part of the training, students get~~ familiar with common documentation and communication mediums such as Microsoft Teams, Word, PowerPoint, Excel, ~~and~~ Google Docs and Google Charts, and develop group presentation skills. ~~Charts.~~

Course Pre-Requisites (if applicable):

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes ~~No~~

Details of PLAR:

Assessment methods include writing an exam and conducting an interview.

Students will receive an 'S' grade (satisfactorily completed) which is not included in grade GPA calculations.

International Students should contact the VCC International Education Advising to learn how PLAR can impact immigration status, prior to proceeding with the PLAR request.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Explain the fundamentals of effective workplace communications ~~communication~~
CLO #2	Demonstrate understanding of key professional and ethical standards ~~Explain how our perceptions, personalities, values, and emotions shape our behaviour~~
CLO #3	Explain how perceptions, personalities, values and emotions shape behaviour ~~Explain effective team-building and conflict resolution skills~~
CLO #4	Demonstrate effective team-building and conflict resolution skills ~~Explain the benefits of and the challenges faced with group decision making~~
CLO #5	Recognize and respond effectively to challenges in group-based decision-making ~~Evaluate information for accuracy, relevance, and develop critical thinking skills to prepare strong arguments~~
CLO #6	Apply critical thinking skills to evaluate the accuracy and relevance of information ~~Write a variety of documents such as reports, proposals, and instructions~~
CLO #7	Produce well-structured professional documents, including reports, proposals and instructional materials ~~Apply workplace writing skills to specific sample work related cases~~
CLO #8	Use Microsoft Word, PowerPoint, Excel, Google Docs and Google Charts ~~Use Office applications such as Microsoft Word, Microsoft Excel, PowerPoint and Google docs and charts at a basic level~~
CLO #9	Collaborate effectively using Microsoft Teams

Instructional Strategies:

Instructional strategies include classroom lectures, demonstrations, group discussions, computer labs ~~lab~~ and hands-on practical work.

Evaluation and Grading

Grading System: Letter Grade (A-F)

Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Assignments	40	4 assignments
Quizzes/Tests	10	
Midterm Exam	15	
Final Exam	20	
Project	15	Group presentation

Hours by Learning Environment Type

To complete this section:
1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.
Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 60

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Online

Hours in Category 1: 35

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Lab

Hours in Category 2: 25

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Hours in Category 3: 0

Course Topics

Course Topics:
Perceptions, personalities and emotions ~~Organizational behaviour~~
Personal values and behaviour ~~Perceptions, personalities and emotions~~
Effective team building ~~Values and behaviour~~
Organizational politics and conflict management ~~Effective team building skills~~
Interpersonal communication strategies ~~Conflict management~~
Workplace communications and culture ~~Organizational politics~~
Report writing using Microsoft Word and Google docs ~~Interpersonal and oral communication strategies~~
Data management and charting using Excel worksheets and Google Charts ~~The fundamentals of workplace communication skills and culture~~
Professional email communications using Outlook ~~Microsoft Docs, Spreadsheet~~
Collaboration using Microsoft Teams ~~Google docs, charts, sheet~~
~~Powerpoint, Outlook, how to write proper business email~~
~~MS Team collaboration~~
~~Business Presentation, Report, Business Plan~~

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Course Change Request

Date Submitted: 04/03/25 1:25 pm

Viewing: CSTP 1106 : Website Development

Last approved: 05/20/22 5:23 am

Last edit: 05/05/25 4:58 pm

Changes proposed by: xliu

Programs referencing this course

122: Computer Systems Technology Diploma

168: Web Development and Design Diploma

Course Name:
Website Development

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Computer Systems Technology (4702)

Contact(s)

In Workflow

1. 4702 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Records
6. Banner

Approval Path

1. 04/03/25 1:26 pm Xing Liu (xliu): Approved for 4702 Leader
2. 04/04/25 10:30 am Lucy Griffith (lgriffith): Approved for CTT Dean
3. 05/06/25 11:29 am Todd Rowlatt (trowlatt): Approved for Curriculum Committee

History

1. Aug 3, 2018 by cdeans
2. Jul 25, 2019 by Reza Nezami (rnezami)
3. May 20, 2022 by Reza Nezami (rnezami)

Name	E-mail	Phone/Ext.
Xing Liu (Department Head) ~~Reza Nezami~~	xliu@vcc.ca ~~rnezami@vcc.ca~~	6046001369 ~~6043188274~~
Reza Nezami	rnezami@vcc.ca	6043188274

Banner Course Name:	Website Development
Subject Code:	CSTP - Computer Systems Technology
Course Number	1106
Year of Study	1st Year Post-secondary
Credits:	3

Bridge College Code	TT
Bridge Billing Hours	3
Bridge Course Level	01

Course Description:

Students learn the fundamentals of website development and design using Hypertext Markup Language (HTML), Cascading Style Sheets (CSS) and JavaScript. The emphasis of this course is front-end web development.

Students learn how to use HTML and CSS stylesheets to create structured, responsive and visually-appealing websites. They learn how to write client-side scripts using the JavaScript programming language. They learn how to access Document Object Model (DOM) elements, validate web forms and perform website management.

Students are familiarized with various modern HTML elements such as FlexBox and Grid. They learn to use JavaScript frameworks such as react.js and Vue.js to design complex and modular webpages. ~~This course covers the fundamentals of website development and design using Hypertext Markup Language (HTML5), Cascading Style Sheets (CSS), and JavaScript as scripting languages to add dynamic component to static websites. The emphasis in this course is the Front-End of web application.~~

~~Students learn how to create structured websites using HTML5; how to use the most up-to-date CSS styles to create responsive, visually-interesting pages and captivating graphical designs; and how to implement client-side script using basic concepts in JavaScript to access Document Object Model (DOM) elements, to validate web forms, and to perform site management.~~

~~Learners gain familiarity with various modern HTML design tools and APIs such as FlexBox and Grid. Students learn to use JavaScript frameworks such as react.js and Vue.js to make it easier to design complex and modular webpages. Students get familiar with the popular Online Code repository and versioning service Git by using it to keep track of their assignments and projects; all projects and assignments may be submitted to the instructor through Git. Student learn to perform Git activities such as commit, pull, push, pull requests, branching, and cloning.~~

Course Pre-Requisites (if applicable):

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes ~~No~~

Details of PLAR:

Assessment methods include interview, exam and lab demos.

Students will receive an 'S' grade (satisfactorily completed) which is not included in grade GPA calculations.

International Students should contact the VCC International Education Advising to learn how PLAR can impact immigration status, prior to proceeding with the PLAR request.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Describe the World Wide Web and Hyper Text Markup Language (HTML)
CLO #2	Describe how web browsers work with web servers using HTTP ~~and related~~ protocols ~~to retrieve information from web servers~~
CLO #3	Use JavaScript to add dynamic components to web pages ~~Describe the role of JavaScript in adding dynamic components to a web page~~
CLO #4	Use CSS to enhance the layout and aesthetics of web content ~~Describe the role of CSS (Cascading Style Sheet) in a web page~~
CLO #5	Design web pages using CSS and multimedia resources ~~and CSS~~
CLO #6	Design web pages using tables, columns, and CSS Grid

	Upon successful completion of this course, students will be able to:
CLO #7	Use browser-based developer tools ~~Browser Developer Tools~~ and their features
CLO #8	Perform media queries in responsive design in order to create adaptive layouts ~~Perform Media Queries as part of responsive design~~
CLO #9	Design ~~Use tools to design consistent~~ web pages that work for both mobile devices and desktop computers
~~CLO #10~~	~~Identify introductory JavaScript features such arrays, loops, and conditional statements~~
~~CLO #11~~	~~Implement basic client-side programming using JavaScript for accessing DOM elements and adding interactivity to a webpage~~
CLO #10 ~~#12~~	Describe the basics of search ~~SEO (search~~ engine optimization (SEO) ~~optimization)~~

Instructional Strategies:

Instructional strategies include classroom lectures, demonstrations, group discussions, computer labs ~~lab~~ and hands-on practical work.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Assignments	60	All assignments are web design and development projects.
Midterm Exam	20	
Final Exam	20	~~Final Design project:~~ A mockup web page is provided and students must code the page. The page must contain all major design and interactivity features taught in the course.

Hours by Learning Environment Type

To complete this section:

1. Enter the total course hours.

2. Check all instruction types that could be applicable for this course.

3. Breakdown the total hours into each relevant category where instruction types are selected.

Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 60

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Hours in Category 1: 35

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Lab

Hours in Category 2: 25

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Hours in Category 3:

Course Topics

Course Topics:
Basics ~~The basics~~ of the World Wide Web ~~and HyperText Markup Language (HTML)~~
HyperText Markup Language (HTML) ~~HTML vs CSS~~
Cascading Style Sheets (CSS) ~~Web pages: fonts, colours and graphics~~
Fonts, colors and graphics ~~Web pages: multimedia resources~~
Multimedia resources ~~Web pages: tables and Grid, FlexBox~~
Tables, Grid and Flexbox ~~DOM~~
CSS frameworks Bootstrap and others ~~Adding javascript script to HTML~~

Course Topics:
Adding JavaScript code to HTML ~~Javascript basic features and components: variables, arrays, functions, operators, Conditionals~~
JavaScript variables, arrays, functions, operators and conditionals ~~Vue.js and React.js~~
Document Object Model (DOM) ~~CSS frameworks: Bootstrap and others~~
Vue.js and React.js

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Rationale and Consultations

You only have to complete the Rationale and Consultations section once for a group of related proposals (i.e. a number of changes to a PCG and multiple courses). Is this proposal part of a group of related proposals?

Yes

Is this the primary proposal?

No

Primary Proposal

Provide a rationale for this proposal:

Are there any

Additional Information

Provide any additional information if necessary.

Supporting documentation:

Course Change Request

New Course Proposal

Date Submitted: 04/03/25 1:28 pm

Viewing: CSTP 1120 : Intro to Computer Systems

Last edit: 05/05/25 5:00 pm

Changes proposed by: xliu

Programs referencing this course

122: Computer Systems Technology Diploma

In Workflow

1. 4702 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/03/25 1:28 pm Xing Liu (xliu): Approved for 4702 Leader
2. 04/04/25 10:30 am Lucy Griffith (lgriffith): Approved for CTT Dean
3. 05/06/25 11:29 am Todd Rowlatt (trowlatt): Approved for Curriculum Committee

Course Name:
Introduction to Computer Systems

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Computer Systems Technology (4702)

Contact(s)

Name	E-mail	Phone/Ext.
Xing Liu (Department Head)	xliu@vcc.ca	6046001369
Reza Nezami	rnezami@vcc.ca	6043188274

Banner Course Name: Intro to Computer Systems

Subject Code: CSTP - Computer Systems Technology

Course Number 1120

Year of Study	1st Year Post-secondary
Credits:	3

Bridge College Code	TT
Bridge Billing Hours	0-5
Bridge Course Level	01

Course Description:

Students learn the hardware and software of personal computer (PC) systems. Students learn the functionalities of different PC peripheral components. They learn how to install, connect, configure and troubleshoot peripheral components by following safety and operational procedures.

Students learn the fundamentals of Operating Systems (OS). They acquire skills for installing and configuring PCs and other devices in business environments. Topics include OS architecture, file and disk management, BIOS and UEFI, multi-boot, virtual machines, software installation and removal, performance tuning, data protection and back up, and troubleshooting. Networking, security, antivirus and firewalls are also covered.

This course also covers process scheduling, virtual memory, signals and interrupts, and application management under OS.

This course follows the CompTIA A+ certification syllabus and prepares students for the exam. However, writing the exam is not part of the course.

Course Pre-Requisites (if applicable):

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes

Details of PLAR:

Assessment methods include interview, exam and lab demos.

Students will receive an ‘S’ grade (satisfactorily completed) which is not included in grade GPA calculations.

International Students should contact the VCC International Education Advising to learn how PLAR can impact immigration status, prior to proceeding with the PLAR request.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Explain the functionalities of PC hardware components
CLO #2	Troubleshoot common hardware and software issues using diagnostic tools and techniques.
CLO #3	Describe the principles and functions of an operating system.
CLO #4	Understand virtualization concepts and install/configure virtual machines.
CLO #5	Plan, install, and configure operating systems, including Windows and Linux.
CLO #6	Perform disk management and manage data access.
CLO #7	Manage system performance and resource allocation to optimize efficiency.
CLO #8	Configure and maintain user accounts and permissions in a multi-user environment.
CLO #9	Implement and manage system backup and recovery strategies.
CLO #10	Configure and enforce security settings to enhance system protection and mitigate vulnerabilities.
CLO #11	Explain fundamental networking concepts.
CLO #12	Use Windows Control Panel items for system configuration.
CLO #13	Utilize command-line interfaces (CLI) for system administration.
CLO #14	Administer Windows services.

Instructional Strategies:

Instructional strategies include classroom lectures, demonstrations, group discussions, computer labs and hands-on practical work.

Evaluation and Grading

Grading System: Letter Grade (A-F)

Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Lab Work	40	Weekly hands-on lab exercises
Midterm Exam	20	Theoretical questions
Other	20	Hands-on practical exam conducted in the lab
Final Exam	20	Theoretical questions

Hours by Learning Environment Type

To complete this section:
1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.
Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 60

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:
Lecture

Hours in Category 1: 30

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:
Lab

Hours in Category 2: 30

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Hours in Category 3:

Course Topics

Course Topics:
Computer hardware components

Course Topics:
Operating Systems: Windows and Linux
Operation System configuration
Storage and data access, backup, and restore
Security setting
Linux desktop operating system management using shells
Computer network and firewall configuration
Process and application management

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Rationale and Consultations

You only have to complete the Rationale and Consultations section once for a group of related proposals (i.e. a number of changes to a PCG and multiple courses). Is this proposal part of a group of related proposals?

Yes

Is this the primary proposal?

No

Primary Proposal

Additional Information

Provide any additional information if necessary.

Supporting documentation:

Reviewer Comments

Course Change Request

New Course Proposal

Date Submitted: 04/03/25 1:29 pm

Viewing: CSTP 1130 : Python Programming

Last edit: 05/05/25 5:03 pm

Changes proposed by: xliu

Programs referencing this course

122: Computer Systems Technology Diploma

In Workflow

1. 4702 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/03/25 1:29 pm Xing Liu (xliu): Approved for 4702 Leader
2. 04/04/25 10:30 am Lucy Griffith (lgriffith): Approved for CTT Dean
3. 05/06/25 11:29 am Todd Rowlatt (trowlatt): Approved for Curriculum Committee

Course Name:
Python Programming

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Computer Systems Technology (4702)

Contact(s)

Name	E-mail	Phone/Ext.
Xing Liu (Department Head)	xliu@vcc.ca	6046001369
Reza Nezami	rnezami@vcc.ca	6043188274

Banner Course Name: Python Programming

Subject Code: CSTP - Computer Systems Technology

Course Number 1130

Year of Study 1st Year Post-secondary

Credits: 3

Bridge College Code	TT
Bridge Billing Hours	4
Bridge Course Level	01

Course Description:

Students learn introductory computer programming. Students develop problem-solving skills through creating algorithms. They are introduced to structured and object-oriented design techniques. Topics include standard program syntax, variable types, operators, input and output statements, decision-making and looping control structures, methods, classes and objects, encapsulation, instantiation and employment of objects.

This course is hands-on and is taught in Python. Students use Python graphics libraries to develop interactive applications including games while they learn the Python programming language.

Course Pre-Requisites (if applicable):

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes

Details of PLAR:

Assessment methods include interview, exam and lab demos.

Students will receive an 'S' grade (satisfactorily completed) which is not included in grade GPA calculations.

International Students should contact the VCC International Education Advising to learn how PLAR can impact immigration status, prior to proceeding with the PLAR request.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Explain the stages involved in the development of computer programs

	Upon successful completion of this course, students will be able to:
CLO #2	Write readable programs using development tools such as VS Code
CLO #3	Declare variables using proper data types
CLO #4	Write code that receives input and provides output
CLO #5	Describe logical solutions to problems by outlining algorithms in pseudocode
CLO #6	Create code using decision statements and loops
CLO #7	Design and implement reusable functions
CLO #8	Write code using recursion techniques
CLO #9	Write object-oriented code based on encapsulation and inheritance principles

Instructional Strategies:

Instructional strategies include classroom lectures, demonstrations, group discussions, computer labs and hands-on practical work, online learning

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Assignments	60	6 to 10 programming assignments
Midterm Exam	20	
Final Exam	20	

Hours by Learning Environment Type

To complete this section:

1. Enter the total course hours.

2. Check all instruction types that could be applicable for this course.

3. Breakdown the total hours into each relevant category where instruction types are selected.

Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 60

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Hours in Category 1: 30

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Lab

Hours in Category 2: 30

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Hours in Category 3:

Course Topics

Course Topics:
The model of a modern computer
Programming processes and terminology
Algorithms, pseudocode, and computer program design
Variables and scopes
Input and output from command line and files
Functions and modules
Conditions and branching
Repetitions and loops
Recursion
Object-oriented Programming

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Course Change Request

New Course Proposal

Date Submitted: 04/03/25 1:30 pm

Viewing: CSTP 1150 : Applied Math for Programmers

Last edit: 05/05/25 5:04 pm

Changes proposed by: xliu

Programs referencing this course

122: Computer Systems Technology Diploma

Course Name:
Applied Mathematics for Programmers

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Computer Systems Technology (4702)

Contact(s)

Name	E-mail	Phone/Ext.
Reza Nezami	rnezami@vcc.ca	6046001369
Xing Liu	xliu@vcc.ca	6043188274

Banner Course Name: Applied Math for Programmers

Subject Code: CSTP - Computer Systems Technology

Course Number 1150

In Workflow

1. 4702 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/03/25 1:30 pm Xing Liu (xliu): Approved for 4702 Leader
2. 04/04/25 10:30 am Lucy Griffith (lgriffith): Approved for CTT Dean
3. 05/06/25 11:29 am Todd Rowlatt (trowlatt): Approved for Curriculum Committee

Year of Study 1st Year Post-secondary

Credits: 3

Bridge College Code	TT
Bridge Billing Hours	2
Bridge Course Level	01

Course Description:

Students learn the mathematical foundation for technical and programming courses. It covers linear equations, polynomials, periodic, logarithmic, and exponential functions. Students learn to solve linear equations and create graphs for functions. They learn how to represent multi-dimensional data using vectors and matrices, lines, planes and hyperplanes. The course also introduces calculus, probability and statistics which are essential for understanding machine learning (ML) algorithms. Finally, the course also teaches basic logic and reasoning, as well as binary data representation in computers.

Course Pre-Requisites (if applicable):

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes

Details of PLAR:

Assessment methods include interview, exam and demos.

Students will receive an 'S' grade (satisfactorily completed) which is not included in grade GPA calculations.

International Students should contact the VCC International Education Advising to learn how PLAR can impact immigration status, prior to proceeding with the PLAR request.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Solve linear equations and graph polynomials, periodic, logarithmic, and exponential functions
CLO #2	Draw and interpret graphs of various function types

	Upon successful completion of this course, students will be able to:
CLO #3	Explain computer binary data representations for integer and floating-point numbers, and for symbols and characters
CLO #4	Explain basic logic and reasoning using Boolean algebra
CLO #5	Use vectors and matrices to represent multi-dimensional data
CLO #6	Understand how lines, planes and hyperplanes represent data
CLO #7	Apply fundamental concepts of calculus to analyze and solve problems
CLO #8	Use probability and statistics to analyze data
CLO #9	Apply mathematical concepts to solve real-life and technology-related problems

Instructional Strategies:

Instructional strategies include classroom lectures, demonstrations, group discussions, computer labs and hands-on practical work, and online sessions.

Evaluation and Grading

Grading System: Letter Grade (A-F)

Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Assignments	50	assignments
Midterm Exam	25	
Final Exam	25	

Hours by Learning Environment Type

To complete this section:
1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.
Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 60

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Hours in Category 1: 30

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Lab

Hours in Category 2: 30

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Hours in Category 3:

Course Topics

Course Topics:
Solving and graphing linear equations
Concepts of polynomials, periodic, logarithmic and exponential functions
Create graphs for polynomials, periodic, logarithmic and exponential functions
Represent multi-dimensional data using lines, planes and hyperplanes
Computer data representation for integers, characters and floating-point numbers
Basic calculus and their applications
Probability, statistics and their applications
Mathematics, machine learning algorithms and artificial intelligence
Binary numbers addition and overflow, subtraction and underflow and 2's complement

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Rationale and Consultations

Course Change Request

Date Submitted: 04/03/25 1:32 pm

Viewing: CSTP 1202 : ~~Intro to~~ Data Com & Networking

Last approved: 05/20/22 5:23 am

Last edit: 05/06/25 9:53 am

Changes proposed by: xliu

Programs referencing this course

122: Computer Systems Technology Diploma

Course Name:

~~Introduction to~~ Data Communication and Networking

Effective Date:	September 2026
School/Centre:	Trades, Technology & Design
Department:	Computer Systems Technology (4702)

Contact(s)

In Workflow

1. **4702 Leader**
2. **CTT Dean**
3. **Curriculum Committee**
4. **Education Council**
5. Records
6. Banner

Approval Path

1. 04/03/25 1:32 pm Xing Liu (xliu): Approved for 4702 Leader
2. 04/04/25 10:30 am Lucy Griffith (lgriffith): Approved for CTT Dean
3. 05/06/25 11:29 am Todd Rowlatt (trowlatt): Approved for Curriculum Committee

History

1. Aug 3, 2018 by cdeans
2. Jul 25, 2019 by Reza Nezami (rnezami)
3. May 20, 2022 by Reza Nezami (rnezami)

Name	E-mail	Phone/Ext.
Xing Liu (Department Head)	xliu@vcc.ca	6046001369
Reza Nezami	rnezami@vcc.ca	6043188274

Banner Course Name: ~~Intro to~~ Data Com & Networking

Subject Code: CSTP - Computer Systems Technology

Course Number 1202

Year of Study 1st Year Post-secondary

Credits: 3

Bridge College Code TT

Bridge Billing Hours 3

Bridge Course Level 01

Course Description:

Students learn ~~In this course learners study~~ the fundamentals of computer networking, protocols, components, major networking technologies and ~~systems of~~ modern networks, and learn ~~will be able~~ to configure, manage, and troubleshoot modern networks.

The topics include TCP/IP protocol suite, multiplexing/switching techniques, ~~basic~~ error detection and correction, elementary data link protocols, flow control, ~~control and an introduction to~~ routing and congestion control, ~~control issues,~~ multiple access protocols, networking and inter-networking devices, LANs and WANs. ~~This course presents content required in the objectives of the CompTIA Network+ certification exam.~~ The basics ~~Basics~~ of Cloud computing and network security will be covered as well.

This course follows the CompTIA Network+ certification syllabus and prepares students for the exam. However, writing the exam is not part of the course.

Course Pre-Requisites (if applicable):

CSTP 1120 or equivalent, taken prior to or concurrently. ~~CSTP 1104.~~

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

No

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Describe computer networks and network media
CLO #2	Identify major types of network implementations
CLO #3	Configure the TCP/IP protocol in network settings
CLO #4	Identify major TCP/IP services in computer networks
CLO #5	Describe WAN infrastructures and their applications
CLO #6 ~~#8~~	Identify components of remote networking
CLO #7 ~~#9~~	Identify methods of network management
CLO #8 ~~#6~~	Identify components of Cloud ~~cloud~~ computing and virtualization
CLO #9	Describe the basics of computer security
CLO #10 ~~#7~~	Describe methods of preventing security breaches

Instructional Strategies:

Instructional strategies include classroom lectures, demonstrations, group discussions, computer labs ~~lab~~ and hands-on practical work.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Assignments	20	

Type	Percentage	Brief description of assessment activity
Lab Work	20	
Midterm Exam	20	
Final Exam	25	
Quizzes/Tests	15	

Hours by Learning Environment Type

To complete this section:
1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.
Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 60

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Hours in Category 1: 25

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Lab

Hours in Category 2: 35

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Hours in Category 3:

Course Topics

Course Topics:
Computer networks and media

Course Topics:
Network implementations
TCP/IP protocol and services
IP addressing and port numbers ~~IP addressing, port number~~
Domain name systems ~~DNS~~
WAN infrastructures
Remote networking
Network management and troubleshooting
Network security
Windows firewalls ~~Windows Firewall (basic security)~~
Linux networking

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Rationale and Consultations

You only have to complete the Rationale and Consultations section once for a group of related proposals (i.e. a number of changes to a PCG and multiple courses). Is this proposal part of a group of related proposals?

Yes

Is this the primary proposal?

No

Primary Proposal

Additional Information

Provide any additional information if necessary.

Supporting documentation:

Course Change Request

Date Submitted: 04/03/25 1:33 pm

Viewing: CSTP 1204 : Software Analysis and Design

Last approved: 12/11/24 7:04 am

Last edit: 05/06/25 9:54 am

Changes proposed by: xliu

Programs referencing this course

122: Computer Systems Technology Diploma

Course Name:
Software Analysis and Design

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Computer Systems Technology (4702)

Contact(s)

In Workflow

1. **4702 Leader**
2. **CTT Dean**
3. **Curriculum Committee**
4. **Education Council**
5. Records
6. Banner

Approval Path

1. 04/03/25 1:34 pm Xing Liu (xliu): Approved for 4702 Leader
2. 04/04/25 10:30 am Lucy Griffith (lgriffith): Approved for CTT Dean
3. 05/06/25 11:29 am Todd Rowlatt (trowlatt): Approved for Curriculum Committee

History

1. Aug 3, 2018 by cdeans
2. Jul 25, 2019 by Reza Nezami (rnezami)
3. May 20, 2022 by Reza Nezami (rnezami)
4. Dec 11, 2024 by Reza Nezami (rnezami)

Name	E-mail	Phone/Ext.
Xing Liu	xliu@vcc.ca	6046001369
Reza Nezami	rnezami@vcc.ca	604-318-8274

Banner Course Name:	Software Analysis and Design
Subject Code:	CSTP - Computer Systems Technology
Course Number	1204
Year of Study	1st Year Post-secondary
Credits:	3

Bridge College Code	TT
Bridge Billing Hours	3
Bridge Course Level	01

Course Description:

Students learn the Software Development Life Cycle (SDLC). They learn software requirements collection and analysis, software design and implementation, software testing and deployment, through individual and team exercises.

Students learn the Object-Oriented Modelling techniques and the Unified Modelling Language (UML). They learn how to identify classes and draw their UML diagrams. They learn design patterns and implement their designs using a computer programming language such as Java and C#. They learn software testing techniques such as unit testing and system testing. They learn to use Git for version control.

They also study the fundamentals of software project management using Agile frameworks and SCRUM. ~~In this course students are exposed to the pillars of the Software Development Life Cycle (SDLC). Students explore and apply the concepts required to analyze, design, create, install and document a systems project through individual and team exercises.~~

~~Students learn how to practice Object-Oriented Modelling techniques using the Unified Modelling Language (UML) as well as being introduced to the fundamentals of Project Management. Agile frameworks and SCRUM are used in sample mock team projects.~~

~~Using Object-Oriented Design (OOD), students learn how to identify classes and build the domain model. Learners learn the key players and stakeholders in a typical project and their roles. Various testing types~~

~~such as unit testing, feature testing, regression testing, user acceptance testing, smoke testing, and functional testing are also introduced.~~

~~This course's primary language of programming is Java.~~

Course Pre-Requisites (if applicable):

CSTP 1130 or equivalent, taken prior to or concurrently. ~~CSTP 1105.~~

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

No

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1 ~~#2~~	Describe the Software Development Life Cycle
CLO #2 ~~#3~~	Collect and analyze project requirements ~~Use a modern programming language's interface and its inheritance support to implement proper Object hierarchy and Object-Oriented Design~~
CLO #3 ~~#1~~	Carry out Object-Oriented design ~~Describe Object-Oriented features in a modern programming language such as C#, C++, or Python~~
CLO #4	Create UML diagrams ~~Analyze methods for initiating a project~~
CLO #5 ~~#6~~	Implement Object-Oriented designs using a computer programming language ~~Prepare Unified Modelling Language (UML) models for software design~~
CLO #6 ~~#5~~	Test developed software ~~Prepare project analysis and plans~~
CLO #7	Deploy developed software ~~Design software using Object-Oriented best practices~~
CLO #8	Manage software development projects ~~Prepare a software project for deployment~~
~~CLO #9~~	~~Analyze user feedback in order to refine a design and grow a system~~

Instructional Strategies:

Instructional strategies include classroom lectures, demonstrations, group discussions, computer labs ~~lab~~ and hands-on practical work.

Evaluation and Grading

Grading System: Letter Grade (A-F)

Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Assignments	10 ~~50~~	Programming and design assignments (minimum 2 assignments) ~~Programming assignments~~
Project ~~Quizzes/Tests~~	30 ~~10~~	Create project development timeline; Create and implement project designs; Write project report. ~~Un-announced quick tests~~
Quizzes/Tests	10	
Midterm Exam	20 ~~15~~	Design and coding questions ~~Exam or project~~
Final Exam	30 ~~25~~	Design and coding questions ~~Written in-person test~~

Hours by Learning Environment Type

To complete this section:
1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.
Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 60

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Online

Hours in Category 1: 30

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Lab

Hours in Category 2: 30

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Hours in Category 3:

Course Topics

Course Topics:
Software Development Life Cycle (SDLC)
Agile software development paradigm
Software project requirement collection and analysis ~~A software product stakeholders and requirement analysis~~
Object-oriented design ~~Object Oriented Programming Languages~~
Unified Modelling Language (UML) ~~models for software design~~
Design patterns in software design
Develop object-oriented software ~~Project testing process~~
Unit test and system test ~~Methods for initiating projects~~
Software deployment ~~Object-Oriented methodology to design software~~

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

"Introduction to Software Design With Java", by Martin P. Robillard, https://repository.gctu.edu.gh/files/original/d81245d2fe1e8548cdf83cc7a0b81ff3.pdf

Rationale and Consultations

You only have to complete the Rationale and Consultations section once for a group of related proposals (i.e. a number of changes to a PCG and multiple courses). Is this proposal part of a group of related proposals?

Course Change Request

Date Submitted: 04/03/25 1:34 pm

Viewing: CSTP 1206 : ~~Intro to~~ Intrnt Prog & WebApps

Last approved: 05/20/22 5:23 am

Last edit: 05/06/25 10:10 am

Changes proposed by: xliu

Programs referencing this course

122: Computer Systems Technology Diploma

168: Web Development and Design Diploma

Course Name:

~~Introduction to~~ Internet Programming and ~~&~~ Web Applications

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Computer Systems Technology (4702)

Contact(s)

In Workflow

1. **4702 Leader**
2. **CTT Dean**
3. **Curriculum Committee**
4. **Education Council**
5. Records
6. Banner

Approval Path

1. 04/03/25 1:35 pm Xing Liu (xliu): Approved for 4702 Leader
2. 04/04/25 10:30 am Lucy Griffith (lgriffith): Approved for CTT Dean
3. 05/06/25 11:29 am Todd Rowlatt (trowlatt): Approved for Curriculum Committee

History

1. Aug 3, 2018 by cdeans
2. Jul 25, 2019 by Reza Nezami (rnezami)
3. May 20, 2022 by Reza Nezami (rnezami)

Name	E-mail	Phone/Ext.
Xing Liu	xliu@vcc.ca	6046001369
Reza Nezami	rnezami@vcc.ca	6043188274

Banner Course Name:	~~Intro to~~ Intrnt Prog & WebApps
Subject Code:	CSTP - Computer Systems Technology
Course Number	1206
Year of Study	1st Year Post-secondary
Credits:	3

Bridge College Code	TT
Bridge Billing Hours	3
Bridge Course Level	01

Course Description:

Students learn client and server side web programming using JavaScript based on frameworks and runtime environments such as Node.js and Express.js.

Students learn how to use the Model-View-Controller (MVC) template to design and develop web applications. They work on hands-on projects using No-SQL databases such as MongoDB, PostgreSQL and REST API frameworks. Students use a Git repository to document their project progress throughout the course. ~~Building on the foundation learned in CSTP 1106, students are further exposed to Javascript as a main scripting language on the web on both the client and server side. Related frameworks and runtime environments such as Node.js and Express.js are introduced.~~

~~Students learn how to use the MVC (Model-View-Controller) template to design and develop web applications that work through browsers and have both client side and server side dynamic back-ends. Students develop hands-on projects using No-SQL databases such as MongoDB, Postgresql and the use of REST API (Representational State Transfer) frameworks. Students will be able to use Javascript in depth for both front end and back end components of simple Web applications. Students will use a Git repository to document their progress throughout their projects.~~

Course Pre-Requisites (if applicable):

CSTP 1106 or equivalent, taken prior to or concurrently. ~~CSTP 1105, CSTP 1106.~~

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

No

Details of PLAR

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Setup ~~a suitable~~ webapp development environments ~~environment~~
CLO #2	Build a ~~basic to advanced~~ RESTful web app backend ~~back-end~~
CLO #3	Build distributed web services ~~Build distributed capabilities into an MVC service-web application~~
CLO #4	Use common representation/transport/application protocols for distributed systems
CLO ~~#5~~ ~~#6~~	Program frontend and backend web applications using JavaScript ~~Use Javascript for both front end and back end components of a simple web application and webpage~~
CLO ~~#6~~ ~~#8~~	Use Node.JS and ~~related frameworks such as~~ Express.js to add interactivities ~~in-depth interactivity~~ to ~~a~~ web applications ~~application~~
CLO #7	Use a shared code repository to develop web applications ~~an application~~
CLO ~~#8~~ ~~#5~~	Demonstrate ~~proper~~ team collaborations in ~~collaboration for~~ application development

Instructional Strategies:

Instructional strategies include classroom lectures, demonstrations, group discussions, computer labs ~~lab~~ and hands-on practical work.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Assignments	50	Individual programming assignments developing components of a web app containing both front end and back end components
Project	20	Team ~~A complete~~ project; hands-on practice of most topics learned in class. Details of project specified by the instructor
Final Exam ~~Exam~~	30	In-class exam ~~In-class exam, either a midterm or final~~

Hours by Learning Environment Type

To complete this section:
1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.
Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 60

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Hours in Category 1: 25

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Lab

Hours in Category 2: 35

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Hours in Category 3:

Course Topics

Course Topics:
JavaScript ~~Javascript~~ for interactive Web applications ~~application~~
MVC distributed application frameworks ~~framework~~
Node.js and Express.js frameworks ~~Express framework~~
No-SQL database ~~database:~~ MongoDB
RESTful backend web applications ~~RESTful webapp back-end~~
JSON and DOM ~~JSON(Javascript Object Notation) document format and DOM(Document Object Model) constraint~~
Code versioning using Git and Gitflow ~~(for code versioning)~~
Representation/transport/application protocols for distributed systems ~~system~~

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Rationale and Consultations

You only have to complete the Rationale and Consultations section once for a group of related proposals (i.e. a number of changes to a PCG and multiple courses). Is this proposal part of a group of related proposals?

Yes

Is this the primary proposal?

No

Primary Proposal

Provide a rationale for this proposal:

Are there any expected costs as a

Course Change Request

New Course Proposal

Date Submitted: 04/03/25 1:36 pm

Viewing: CSTP 1210 : Database Systems

Last edit: 05/06/25 10:23 am

Changes proposed by: xliu

Programs referencing this course

122: Computer Systems Technology Diploma

In Workflow

1. 4702 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/03/25 1:36 pm Xing Liu (xliu): Approved for 4702 Leader
2. 04/07/25 11:11 am Lucy Griffith (lgriffith): Approved for CTT Dean
3. 05/06/25 11:29 am Todd Rowlatt (trowlatt): Approved for Curriculum Committee

Course Name:
Database Systems

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Computer Systems Technology (4702)

Contact(s)

Name	E-mail	Phone/Ext.
Xing Liu (Department Head)	xliu@vcc.ca	6046001369
Reza Nezami	rnezami@vcc.ca	604-318-8274

Banner Course Name: Database Systems

Subject Code: CSTP - Computer Systems Technology

Course Number 1210

Year of Study 1st Year Post-secondary

Credits: 3

Bridge College Code	TT
Bridge Billing Hours	4
Bridge Course Level	01

Course Description:

Students learn the basics of relational and non-relational database management systems (SQL and NoSQL). It covers the fundamental concepts of relational databases such as records, tables, normal forms, join operations, queries, data modeling, and data integrity. Students learn how to configure and manage SQL database systems and how to perform basic database administration tasks such as creating users and database schema, applying constraints, setting up access control, assigning memory, defining storage structures and manipulating data. They learn fundamental concepts such as transnational operations, ACID (Atomicity, Consistency, Isolation, and Durability), backup and redundancy, data recovery, database user roles, and concurrency control. Finally, students gain hands-on experience with non-relational (NoSQL) databases such as MongoDB.

Course Pre-Requisites (if applicable):

CSTP 1130 or equivalent, taken prior to or concurrently.

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

No

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Describe the steps in designing SQL databases
CLO #2	Design and normalize databases
CLO #3	Create databases and tables
CLO #4	Create queries that select data from tables
CLO #5	Use JOINs to create SQL database queries

	Upon successful completion of this course, students will be able to:
CLO #6	Create stored procedures and functions
CLO #7	Explain ACID (Atomicity, Consistency, Isolation, and Durability)
CLO #8	Describe the differences between non-relational DB and relational DB
CLO #9	Setup common non-relational DBs such as MongoDB and perform basic operations
CLO #10	Tune database performances and prepare troubleshooting strategies
CLO #11	Perform general DB Admin tasks

Instructional Strategies:

Instructional strategies include classroom lectures, demonstrations, group discussions, computer labs and hands-on practical work.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Assignments	20	4 project assignments, could be individual or team projects
Project	20	Final project
Quizzes/Tests	10	2 quizzes
Midterm Exam	20	
Final Exam	30	

Hours by Learning Environment Type

To complete this section:

1. Enter the total course hours.

2. Check all instruction types that could be applicable for this course.

3. Breakdown the total hours into each relevant category where instruction types are selected.

Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 60

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Hours in Category 1: 30

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Lab

Hours in Category 2: 30

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Hours in Category 3:

Course Topics

Course Topics:
SQL databases
Entity relational diagrams
Data tables and normalization
Queries and data retrieval
Queries and data manipulation
SQL stored procedures
Forms and reports
NoSQL databases
ACID property of well designed databases
Database administration

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Course Change Request

New Course Proposal

Date Submitted: 04/03/25 1:37 pm

Viewing: CSTP 1230 : C++ Programming

Last edit: 05/06/25 10:23 am

Changes proposed by: xliu

Programs referencing this course

122: Computer Systems Technology Diploma

In Workflow

1. 4702 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/03/25 1:37 pm Xing Liu (xliu): Approved for 4702 Leader
2. 04/07/25 11:11 am Lucy Griffith (lgriffith): Approved for CTT Dean
3. 05/06/25 11:29 am Todd Rowlatt (trowlatt): Approved for Curriculum Committee

Course Name:
C++ Programming

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Computer Systems Technology (4702)

Contact(s)

Name	E-mail	Phone/Ext.
Xing Liu	xliu@vcc.ca	6046001369
Reza Nezami	rnezami@vcc.ca	604-318-8274

Banner Course Name: C++ Programming

Subject Code: CSTP - Computer Systems Technology

Course Number 1230

Year of Study 1st Year Post-secondary

Credits: 3

Bridge College Code	TT
Bridge Billing Hours	4
Bridge Course Level	01

Course Description:

Students learn the computer programming language C++. Students learn the basics of C++ and its features. Topics include classes, object life cycle, memory management and smart pointers, program execution life cycle, the Standard Template Library (STL), exception handling, threads and processes.

Students are familiarized with the landscape of programming with C++ and its modern features and will be able to debug, optimize, and restructure existing code in a general application development context.

Course Pre-Requisites (if applicable):

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

No

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Explain C++ syntax and programming constructs
CLO #2	Identify and use data types and variables effectively
CLO #3	Implement control structures such as loops and conditional statements
CLO #4	Design and implement functions that receive and return values
CLO #5	Manipulate strings and arrays
CLO #6	Use dynamic memory allocation techniques
CLO #7	Use algorithms and containers in the C++ Standard Template Library

	Upon successful completion of this course, students will be able to:
CLO #8	Perform file input and output operations
CLO #9	Use object-oriented programming techniques such as classes, objects, inheritance, polymorphism, and encapsulation.
CLO #10	Employ debugging and testing techniques to identify and fix errors

Instructional Strategies:

Instructional strategies include classroom lectures, demonstrations, group discussions, computer labs and hands-on practical work.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Assignments	50	One assignment per week, except the 2 weeks of exams
Midterm Exam	20	
Final Exam	20	
Quizzes/Tests	10	

Hours by Learning Environment Type

To complete this section:
1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.
Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 60

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Hours in Category 1: 30

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Lab

Hours in Category 2: 30

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Hours in Category 3:

Course Topics

Course Topics:
Overview of the C++ programming language
Data types, variables and scope
Loops, conditional statements and program flow
Functions, parameter passing, return values, and scope
Arrays, strings, and string manipulation
Pointers, dynamic memory allocation and deallocation
Object-oriented programming, classes, objects, inheritance, polymorphism, and encapsulation
File input and output, file streams, and error handling
Standard Template Library, vectors, lists, maps, and algorithms
Debugging, testing and code quality

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Rationale and Consultations

You only have to complete the Rationale and Consultations section once for a group of related proposals (i.e. a number of changes to a PCG and multiple courses). Is this proposal part of a group of related proposals?

Course Change Request

Date Submitted: 04/03/25 1:38 pm

Viewing: CSTP 2104 : Windows Interactive App Prog

Last approved: 05/20/22 5:23 am

Last edit: 05/06/25 10:24 am

Changes proposed by: xliu

Programs referencing this course

122: Computer Systems Technology Diploma

Course Name:
Windows Interactive Application Programming

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Computer Systems Technology (4702)

Contact(s)

In Workflow

1. **4702 Leader**
2. **CTT Dean**
3. **Curriculum Committee**
4. **Education Council**
5. Records
6. Banner

Approval Path

1. 04/03/25 1:38 pm Xing Liu (xliu): Approved for 4702 Leader
2. 04/07/25 11:11 am Lucy Griffith (lgriffith): Approved for CTT Dean
3. 05/06/25 11:29 am Todd Rowlatt (trowlatt): Approved for Curriculum Committee

History

1. Aug 3, 2018 by cdeans
2. Jul 25, 2019 by Reza Nezami (rnezami)
3. May 20, 2022 by Reza Nezami (rnezami)

Name	E-mail	Phone/Ext.
Xing Liu	xliu@vcc.ca	6046001369
Reza Nezami	rnezami@vcc.ca	604-318-8274

Banner Course Name:	Windows Interactive App Prog
Subject Code:	CSTP - Computer Systems Technology
Course Number	2104
Year of Study	2nd Year Post-secondary
Credits:	3

Bridge College Code	TT
Bridge Billing Hours	3
Bridge Course Level	01

Course Description:

Students learn to develop applications for the Microsoft Windows Operating System using the Universal Windows Platform (UWP) framework, the .NET framework, and the C# programming language. They develop consistent user interfaces using XAML for all Windows devices. Students also use the ASP.NET Core framework and the Entity framework to develop dynamic web applications. Students use C#, Object-oriented programming concepts, the Model-View-Controller model and database servers to design and develop Windows and ASP.NET Web applications. ~~In this course students gain a strong familiarity with developing applications specifically for the Microsoft Windows Operating System using Universal Windows Platform (UWP) framework and .NET. The core of Windows development environment relies on .NET framework. Students are expected to have good background in programming and have already taken a course in which they have been exposed to C# programming language. The UWP computing platform is introduced and used extensively along with XAML to provide a shared development environment and a consistent feel and look across all Windows devices.~~

~~Students also get familiar with using ASP.NET to produce dynamic web applications using Entity Framework. Related technologies are also used such as LINQ for adding querying capabilities.~~

~~Students will develop sample Windows/Web applications using the above technologies and platforms, practicing Object-Oriented Programming, and the Model-View-Controller (MVP) model of design and development. Students deploy their ASP.NET applications in the cloud. For some project students may also use Microsoft SQL servers for database services.~~

Course Pre-Requisites (if applicable):

~~CSTP 1302.~~

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

No

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Develop UWP applications using the .NET framework ~~Describe the scope of the .NET framework including UWP~~
CLO #2	Explain ~~Describe~~ the role of ASP.NET in developing Web applications and Single Page Applications (SPAs)
CLO #3	Use Visual Studio to build responsive ASP.NET ~~MVC Core~~ applications using the latest framework in C# and the MVC model
CLO #4	Use ADO.NET and Entity Framework to create databases for web applications ~~to use in an application~~
CLO #5	Serialize and deserialize data objects ~~Serialize and deserialize Objects in a .NET Framework~~
CLO #6	Use C# design ~~Design~~ patterns to write high quality code
CLO #7	Implement the latest .NET features including LINQ, lambdas ~~Lambdas~~ and extension methods ~~Extension Methods~~
CLO #8	Deploy advanced C# software applications locally and to the Cloud ~~cloud~~
CLO #9	Develop multi-threaded applications using async ~~Use async/await in the context of developing multi-threaded .NET applications~~
CLO #10	Use ~~Consume~~ .NET Services with ~~using~~ various tools

Instructional Strategies:

Instructional strategies include classroom lectures, demonstrations, group discussions, computer labs ~~lab~~ and hands-on practical work.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Project	70	Multiple small projects, progressively integrated to create a larger final project ~~Multiple projects, preferably integrating together to create a final advanced bigger project, so student can use on their Portfolio.~~ ~~Overall, projects must be graded gradually stepwise, so student how they are progressing~~
Final Exam	30	Project given in the last week. Some components must be finished in a lab during the exam session. ~~Exam can be a final project, for example given in last week. The must be components that student must finish in lab during the exam class session.~~

Hours by Learning Environment Type

To complete this section:
1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.
Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 60

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Hours in Category 1: 30

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Lab

Hours in Category 2: 30

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Hours in Category 3:

Course Topics

Course Topics:
Microsoft .NET framework
UWP application development on Windows
ASP.NET MVC applications
Visual Studio and MSDN Library
Object Serialization and Deserialization
.NET Collection ~~collection~~ classes
ADO.NET
LINQ and data queries
Muti-threading
~~Creating~~ Micro Services

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Rationale and Consultations

You only have to complete the Rationale and Consultations section once for a group of related proposals (i.e. a number of changes to a PCG and multiple courses). Is this proposal part of a group of related proposals?

Yes

Course Change Request

New Course Proposal

Date Submitted: 04/03/25 1:39 pm

Viewing: CSTP 2120 : Client-Server Computing

Last edit: 05/06/25 10:25 am

Changes proposed by: xliu

Programs referencing this course

122: Computer Systems Technology Diploma

In Workflow

1. 4702 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/03/25 1:39 pm Xing Liu (xliu): Approved for 4702 Leader
2. 04/07/25 11:11 am Lucy Griffith (lgriffith): Approved for CTT Dean
3. 05/06/25 11:29 am Todd Rowlatt (trowlatt): Approved for Curriculum Committee

Course Name:
Client-Server Computing

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Computer Systems Technology (4702)

Contact(s)

Name	E-mail	Phone/Ext.
Xing Liu	xliu@vcc.ca	6046001369
Reza Nezami	rnezami@vcc.ca	6043188274

Banner Course Name: Client-Server Computing

Subject Code: CSTP - Computer Systems Technology

Course Number 2120

Year of Study 2nd Year Post-secondary

Credits: 3

Bridge College Code	TT
Bridge Billing Hours	3
Bridge Course Level	01

Course Description:

Students learn the fundamentals of developing distributed applications based on the client-server model. Students learn how to design and implement client-server applications based on the TCP/IP network protocol suite, and how to use sockets to enable TCP or UDP communications between hosts and clients.

Student develop console, windows, or browser based applications such as Chatbot, file transfer app, or multi-player games such as Chess. Students learn to secure their applications using the Secure Socket Layer (SSL) or HTTPS protocols.

Students learn to develop networked and distributed applications in consideration of performance, delays, reliability, synchronization, scalability, and security issues.

Course Pre-Requisites (if applicable):

CSTP 1230 or equivalent, taken prior to or concurrently.

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

No

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Explain the key concepts in networked client-server software systems
CLO #2	Describe how sockets are created, setup, and managed during communications
CLO #3	Explain the differences between threads and processes in software applications
CLO #4	Use sockets, datagrams, multi-casting, multi-threading, and multi-processing to develop distributed web, mobile and desktop applications

	Upon successful completion of this course, students will be able to:
CLO #5	Explain how SSL secures the communications between servers and endpoints
CLO #6	Test, debug, and deploy client-server software applications
CLO #7	Deploy client-server applications on physically separated hosts, debug and test their performances

Instructional Strategies:

Instructional strategies include classroom lectures, demonstrations, group discussions, computer labs and hands-on practical work.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Assignments	45	Individual or team projects in which students hands in source code and exe based on the project requirements.
Midterm Exam	15	In-class written exam.
Lab Work	25	
Final Exam	25	In-class written exam.

Hours by Learning Environment Type

To complete this section:
1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.
Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 60

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture
Online

Hours in Category 1: 30

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:
Lab

Hours in Category 2: 30

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Hours in Category 3:

Course Topics

Course Topics:
Client-server architecture
Networking and protocols
Socket and datagram APIs
Multithreading and thread synchronization in client-server applications
Building reliable connection oriented communication using TCP
HTTPS and OpenSSL, HTTP and RTP, non-real time and real-time distributed applications
Messaging using web sockets
Building secure connections using HTTPS and OpenSSL
Building connections using UDP

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Rationale and Consultations

You only have to complete the Rationale and Consultations section once for a group of related proposals (i.e. a number of changes to a PCG and multiple courses). Is this proposal part of a group of related proposals?

Course Change Request

New Course Proposal

Date Submitted: 04/03/25 1:41 pm

Viewing: CSTP 2130 : AI Technologies

Last edit: 05/06/25 10:29 am

Changes proposed by: xliu

Programs referencing this course

122: Computer Systems Technology Diploma

In Workflow

1. 4702 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/03/25 1:41 pm Xing Liu (xliu): Approved for 4702 Leader
2. 04/07/25 11:11 am Lucy Griffith (lgriffith): Approved for CTT Dean
3. 05/06/25 11:29 am Todd Rowlatt (trowlatt): Approved for Curriculum Committee

Course Name:
AI Technologies

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Computer Systems Technology (4702)

Contact(s)

Name	E-mail	Phone/Ext.
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Banner Course Name: AI Technologies

Subject Code: CSTP - Computer Systems Technology

Course Number 2130

Year of Study 2nd Year Post-secondary

Credits: 3

Bridge College Code	TT
Bridge Billing Hours	3
Bridge Course Level	01

Course Description:

Students learn new and emerging artificial intelligence (AI) technologies. These technologies are disruptive and are creating new streams of functionalities, apps, and products. Students examine trends, changes in software development practices, and application development directions. They apply Machine Learning (ML) techniques in data analysis and embed AI agents in software applications. The course also reviews AI applications in Cloud computing, virtualization, system simulation, and network security.

Course Pre-Requisites (if applicable):

CSTP 1130 or equivalent, taken prior to or concurrently; CSTP 1150 or equivalent, taken prior to or concurrently.

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

No

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Identify emerging technologies that are changing the marketplace
CLO #2	Explain the key concepts of machine learning and data analysis
CLO #3	Explain the key concepts of Generative AI (gen AI) and large language models (LLMs)
CLO #4	Explain the key concepts of AI agents
CLO #5	Identify the processes required to implement emerging technologies, with a focus on integrating AI into existing systems
CLO #6	Develop plans for introducing a new AI technology in simulated workplace setting

	Upon successful completion of this course, students will be able to:
CLO #7	Apply AI techniques to develop innovative solutions and applications
CLO #8	Apply AI techniques in software development.
CLO #9	Add AI capabilities to existing software applications

Instructional Strategies:

Instructional strategies include classroom lectures, demonstrations, group discussions, computer labs and hands-on practical work.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Assignments	40	
Midterm Exam	20	In-class written exam.
Project	20	Team project.
Final Exam	20	In-class written exam.

Hours by Learning Environment Type

To complete this section:
1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.
Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 60

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Hours in Category 1: 30

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Lab

Hours in Category 2: 30

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Hours in Category 3:

Course Topics

Course Topics:
The dynamics of emerging AI technologies
foundations of machine learning and techniques
Data collection and preparation for machine learning applications
AI libraries and tools
Algorithms for regression, classification, reinforcement learning
Development of software applications with AI capabilities
Projects with real-world applications

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Rationale and Consultations

You only have to complete the Rationale and Consultations section once for a group of related proposals (i.e. a number of changes to a PCG and multiple courses). Is this proposal part of a group of related proposals?

Yes

Is this the primary proposal?

Course Change Request

New Course Proposal

Date Submitted: 04/03/25 1:42 pm

Viewing: CSTP 2140 : Algorithms & Data Structures

Last edit: 05/06/25 10:31 am

Changes proposed by: xliu

Programs referencing this course

122: Computer Systems Technology Diploma

Course Name:
Algorithms and Data Structures

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Computer Systems Technology (4702)

Contact(s)

Name	E-mail	Phone/Ext.
Xing Liu	xliu@vcc.ca	6046001369
Reza Nezami	rnezami@vcc.ca	6043188274

Banner Course Name: Algorithms & Data Structures

Subject Code: CSTP - Computer Systems Technology

Course Number 2140

In Workflow

1. 4702 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/03/25 1:42 pm Xing Liu (xliu): Approved for 4702 Leader
2. 04/07/25 11:11 am Lucy Griffith (lgriffith): Approved for CTT Dean
3. 05/06/25 11:29 am Todd Rowlatt (trowlatt): Approved for Curriculum Committee

Year of Study 2nd Year Post-secondary

Credits: 3

Bridge College Code	TT
Bridge Billing Hours	3
Bridge Course Level	01

Course Description:

Students learn the fundamentals of algorithm analysis and design through hands-on practice in this course. They study various algorithms and data structures frequently used in software development. Students learn to analyze the time and space complexities of algorithms and choose algorithms for non-trivial programming problems.

Data structures covered in this course include: arrays and vectors, lists, queues, stacks, and trees and graphs. Algorithms covered include: recursion, divide and conquer, greedy techniques and sorting algorithms.

Course Pre-Requisites (if applicable):

CSTP 1204 or equivalent, taken prior to or concurrently.

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

No

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Explain the applications of common data structures
CLO #2	Explain the difference between iterative and recursive algorithms
CLO #3	Choose suitable data structures to solve practical problems
CLO #4	Identify algorithmic bottlenecks in application code and suggest solutions
CLO #5	Derive time and space complexities of common algorithms
CLO #6	Select proper sorting algorithms for sorting a data collection

	Upon successful completion of this course, students will be able to:
CLO #7	Implement generic data structures such as linked list and binary trees
CLO #8	Implement common traversal algorithms for data structures

Instructional Strategies:

Instructional strategies include classroom lectures, demonstrations, group discussions, computer labs and hands-on practical work.

Evaluation and Grading

Grading System: Letter Grade (A-F)

Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Assignments	60	
Midterm Exam	20	
Final Exam	20	

Hours by Learning Environment Type

To complete this section:
1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.
Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 60

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Hours in Category 1: 30

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Lab

Hours in Category 2: 30

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Hours in Category 3:

Course Topics

Course Topics:
The fundamentals of algorithm analysis
Vectors and Arrays
Lists
Iteration vs Recursion
Common Sorting algorithms
Time and space complexity analysis
Divide and conquer and greedy algorithms
Stacks and queues
Graphs
Binary trees and balanced binary trees
Tree traversal algorithms

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Rationale and Consultations

You only have to complete the Rationale and Consultations section once for a group of related proposals (i.e. a number of changes to a PCG and multiple courses). Is this proposal part of a group of related proposals?

Yes

Course Change Request

New Course Proposal

Date Submitted: 04/03/25 1:43 pm

Viewing: CSTP 2150 : UI/UX Development

Last edit: 05/06/25 10:31 am

Changes proposed by: xliu

Programs referencing this course

122: Computer Systems Technology Diploma

In Workflow

1. 4702 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/03/25 1:43 pm Xing Liu (xliu): Approved for 4702 Leader
2. 04/07/25 11:11 am Lucy Griffith (lgriffith): Approved for CTT Dean
3. 05/06/25 11:29 am Todd Rowlatt (trowlatt): Approved for Curriculum Committee

Course Name:
UI/UX Development

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Computer Systems Technology (4702)

Contact(s)

Name	E-mail	Phone/Ext.
Xing Liu	xliu@vcc.ca	6046001369
Reza Nezami	rnezami@vcc.ca	6043188274

Banner Course Name: UI/UX Development

Subject Code: CSTP - Computer Systems Technology

Course Number 2150

Year of Study 2nd Year Post-secondary

Credits: 2

Bridge College Code	TT
Bridge Billing Hours	2
Bridge Course Level	01

Course Description:

Students learn user interface and user eXperience (UI/UX) design concepts for developing efficient interfaces for websites, mobile applications, and software applications in general. Key concepts covered include: information architecture, client goals, ideal users, card sorting, journey mapping, site mapping, service mapping, mood boards, prototyping, wireframes, metaphor, branding, user flow, peer testing mockups, whiteboard challenges, and usability reports.

Students learn to analyze interface requirements and user interactions. They follow the guidelines of user-centered design (UCD) to design responsive websites that work properly on both desktop and mobile devices.

Course Pre-Requisites (if applicable):

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

No

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Explain the importance of user-centered design (UCD)
CLO #2	Use product user stories in designing user interfaces
CLO #3	Explain the relationship between user eXperience (UX) design and the Agile methodology
CLO #4	Identify usability heuristics and apply them in website and mobile development
CLO #5	Identify anti-patterns in UI design and explain why they are not acceptable

	Upon successful completion of this course, students will be able to:
CLO #6	Develop efficient prototypes for websites and mobile apps
CLO #7	Analyze and select suitable evaluation methods in an iterative agile process to improve UI design and user experience

Instructional Strategies:

Instructional strategies include classroom lectures, demonstrations, group discussions, computer labs and hands-on practical work.

Evaluation and Grading

Grading System: Letter Grade (A-F)

Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Assignments	30	3 assignments worth 10% each
Quizzes/Tests	25	
Project	30	
Other	15	Project presentation

Hours by Learning Environment Type

To complete this section:
1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.
Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 40

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Hours in Category 1: 20

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Lab

Hours in Category 2: 20

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Hours in Category 3:

Course Topics

Course Topics:
The importance of the user interface for websites and mobile applications
UX research, user stories, storyboarding, journey maps
Mood boards, UX testing, service mapping
Effective prototyping and wireframes using iterative methodologies
Mobile-dedicated websites
Human centred design, colour theory

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Rationale and Consultations

You only have to complete the Rationale and Consultations section once for a group of related proposals (i.e. a number of changes to a PCG and multiple courses). Is this proposal part of a group of related proposals?

Yes

Is this the primary proposal?

No

Primary Proposal

Course Change Request

New Course Proposal

Date Submitted: 04/03/25 1:44 pm

Viewing: CSTP 2210 : Cloud Computing

Last edit: 05/06/25 10:32 am

Changes proposed by: xliu

Programs referencing this course

122: Computer Systems Technology Diploma

In Workflow

1. 4702 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/03/25 2:02 pm Xing Liu (xliu): Approved for 4702 Leader
2. 04/07/25 11:11 am Lucy Griffith (lgriffith): Approved for CTT Dean
3. 05/06/25 11:29 am Todd Rowlatt (trowlatt): Approved for Curriculum Committee

Course Name:
Cloud Computing

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Computer Systems Technology (4702)

Contact(s)

Name	E-mail	Phone/Ext.
Xing Liu	xliu@vcc.ca	6046001369
Reza Nezami	rnezami@vcc.ca	6043188274

Banner Course Name: Cloud Computing

Subject Code: CSTP - Computer Systems Technology

Course Number 2210

Year of Study 2nd Year Post-secondary

Credits: 3

Bridge College Code	TT
Bridge Billing Hours	3
Bridge Course Level	01

Course Description:

Students learn to install, configure, and manage organization-oriented Cloud infrastructures. Students study Cloud as a Platform which replaces traditional local hardware. Topics include Cloud deployment models, Cloud platform architectures, Cloud computing platforms and comparative analysis.

Students also study virtual machine instances, load balancers, auto scaling groups, snapshots, and Cloud networking. They work with virtual private Clouds (VPC), Cloud storage and content delivery through Cloud-hosted databases. Cloud security models such as user identity, access management, and resource security are also introduced. Students gain practical experience through labs which use various Cloud service providers such as Microsoft, VMWare, Google, and Amazon.

Course Pre-Requisites (if applicable):

CSTP 2120 or equivalent, taken prior to or concurrently.

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

No

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Explain the components of Cloud infrastructures and their functions
CLO #2	Describe Cloud platforms, their architectures, and their characteristics
CLO #3	Describe various types of Cloud services and deployment models
CLO #4	Evaluate risks associated with Cloud computing and implement mitigation strategies
CLO #5	Configure Cloud services on commercially available Cloud service providers

	Upon successful completion of this course, students will be able to:
CLO #6	Design and deploy Cloud-based websites
CLO #7	Design and implement Cloud-based database systems
CLO #8	Configure and monitor remote resources
CLO #9	Design, deploy, and manage virtual private Cloud systems

Instructional Strategies:

Instructional strategies include classroom lectures, demonstrations, group discussions, computer labs and hands-on practical work.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Assignments	55	This includes mini projects which are done individually
Exam	25	This is a written exam which include pseudo-code, testing course concepts mastery and description of big picture strategies.
Project	20	This is team project, can serve as the final exam.

Hours by Learning Environment Type

To complete this section:
1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.
Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 60

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Hours in Category 1: 30

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Lab

Hours in Category 2: 30

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Hours in Category 3:

Course Topics

Course Topics:
Cloud service models: SaaS, PaaS, IaaS
Cloud deployment models and their differences
Available Cloud service platforms and their features
Azure services and APIs
Amazon Cloud Services and AWS APIs
Google Cloud Services and APIs
Cloud-based websites
Cloud-based database systems
Virtual private Cloud systems

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Rationale and Consultations

Course Change Request

New Course Proposal

Date Submitted: 04/03/25 1:46 pm

Viewing: CSTP 2220 : Computer Security

Last edit: 05/06/25 10:33 am

Changes proposed by: xliu

Programs referencing this course

122: Computer Systems Technology Diploma

Course Name:
Computer Security

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Computer Systems Technology (4702)

Contact(s)

Name	E-mail	Phone/Ext.
Xing Liu	xliu@vcc.ca	6046001369
Reza Nezami	rnezami@vcc.ca	6047646682

Banner Course Name: Computer Security

Subject Code: CSTP - Computer Systems Technology

Course Number 2220

In Workflow

1. 4702 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/03/25 2:02 pm Xing Liu (xliu): Approved for 4702 Leader
2. 04/07/25 11:11 am Lucy Griffith (lgriffith): Approved for CTT Dean
3. 05/06/25 11:29 am Todd Rowlatt (trowlatt): Approved for Curriculum Committee

Year of Study 2nd Year Post-secondary

Credits: 3

Bridge College Code	TT
Bridge Billing Hours	3
Bridge Course Level	01

Course Description:

Students learn the fundamentals of computer security, building on skills learned in CSTP 1202, Data Communication and Networking. They learn the principles of computer and information security in general, and are familiarized with the fundamentals of designing secure hardware and software systems.

Students learn security policies, cryptography, authentication, data protection, access control, and software security. They learn the principles, practices, and analysis methods of secure software systems. Students also study security attacks, intrusions, security measures, evaluation techniques and security enhancement techniques.

Topics covered in detail include cryptographic protocols, authentication and access control, intrusion detection and prevention systems, and security enhancement technologies.

Course Pre-Requisites (if applicable):

CSTP 1202 or equivalent, taken prior to or concurrently.

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

No

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Describe fundamental security concepts
CLO #2	Describe security policies in organizational IT infrastructures
CLO #3	Apply the principles of security design
CLO #4	Explain the concepts of cryptographic protocols, tools, and algorithms

	Upon successful completion of this course, students will be able to:
CLO #5	Describe access control, authentication and account management
CLO #6	Evaluate security certificates
CLO #7	Explain security compliance and operational security
CLO #8	Implement cryptographic algorithms
CLO #9	Troubleshoot and manage security incidents

Instructional Strategies:

Instructional strategies include classroom lectures, demonstrations, group discussions, computer labs and hands-on practical work.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Assignments	30	Labs and assignments
Project	30	A project which implements a popular security framework in the context of Window, web, or mobile application.
Midterm Exam	20	
Final Exam	20	

Hours by Learning Environment Type

To complete this section:
1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.
Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 60

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Hours in Category 1: 30

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Lab

Hours in Category 2: 30

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Hours in Category 3:

Course Topics

Course Topics:
Security Fundamentals
Security threats and vulnerabilities
Data, application and host security
Network security
Access control, authentication and account management
The use of certificates
Compliance and operational security
Cryptographic algorithms and implementation
Risk management
Troubleshooting and managing security incidents

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Course Change Request

New Course Proposal

Date Submitted: 04/03/25 1:49 pm

Viewing: CSTP 2230 : Advanced Web Application Dev

Last edit: 05/06/25 10:34 am

Changes proposed by: xliu

Programs referencing this course

122: Computer Systems Technology Diploma

Course Name:
Advanced Web Application Development

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Computer Systems Technology (4702)

Contact(s)

Name	E-mail	Phone/Ext.
Xing Liu	xliu@vcc.ca	6046001369
Reza Nezami	rnezami@vcc.ca	604-764-6682

Banner Course Name: Advanced Web Application Dev

Subject Code: CSTP - Computer Systems Technology

Course Number 2230

In Workflow

1. 4702 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/03/25 2:02 pm Xing Liu (xliu): Approved for 4702 Leader
2. 04/07/25 11:12 am Lucy Griffith (lgriffith): Approved for CTT Dean
3. 05/06/25 11:29 am Todd Rowlatt (trowlatt): Approved for Curriculum Committee

Year of Study 2nd Year Post-secondary

Credits: 3

Bridge College Code	TT
Bridge Billing Hours	4
Bridge Course Level	01

Course Description:

Students learn advanced web technologies through building fully dynamic web applications. This course is intensive, hands-on, project-based, and team-oriented. Students engage in full stack web development. Students use a NoSQL or MongoDB database to develop an end-to-end web application based on the Model-View-Controller (MVC) architecture.

The course focuses on modern web development stacks such as MEAN (MongoDB, Express.js, AngularJS), LAMP (Linux, Apache, MySQL, Python), MERN (MongoDB, Express, React, and NodeJS), as well as Ember.js, NextJS, server-side scripting, Typescript, SASS, NPM package manager, RESTful API, OAuth, and PHP for some server side queries.

Course Pre-Requisites (if applicable):

CSTP 1206 or equivalent, taken prior to or concurrently; CSTP 1210 or equivalent, taken prior to or concurrently.

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

No

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Setup a development environment and tool-chain as required by the chosen development stack
CLO #2	Develop secure data-driven business web applications
CLO #3	Develop completely dynamic web applications
CLO #4	Use advanced HTML, CSS, and JavaScript techniques to develop client-side web software

	Upon successful completion of this course, students will be able to:
CLO #5	Develop client-side Single Page Applications using technologies such as Angular, React, or Ember
CLO #6	Deploy web applications to the Cloud such as AWS and Azure
CLO #7	Expose data consumed by Single Page Applications through web API
CLO #8	Implement token and session based authentication
CLO #9	Configure and manage web servers compatible with selected stacks
CLO #10	Manage and distribute code base using version control systems

Instructional Strategies:

Instructional strategies include classroom lectures, demonstrations, group discussions, computer labs and hands-on practical work.

Evaluation and Grading

Grading System: Letter Grade (A-F)

Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Project	60	Multi-stage full stack team project
Quizzes/Tests	10	In-class quick tests and quizzes
Participation	10	For active participation of student in team project
Final Exam	20	In-class exam

Hours by Learning Environment Type

To complete this section:
1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.
Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 60

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Hours in Category 1: 25

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Lab

Hours in Category 2: 35

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Hours in Category 3:

Course Topics

Course Topics:
Full stack web development
Anular, React, Ember, NextJS
Typescript
OAuth
Session-based authentication
Web server management
Data-driven web applications
Secure data communication with server
Web development stacks MEAN, LAMP, and MERN
Web Assembly and Web Workers

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Course Change Request

New Course Proposal

Date Submitted: 04/03/25 1:51 pm

Viewing: CSTP 2240 : Capstone Software Dev Project

Last edit: 05/06/25 10:35 am

Changes proposed by: xliu

Programs referencing this course

122: Computer Systems Technology Diploma

Course Name:
Capstone Software Development Project

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Computer Systems Technology (4702)

Contact(s)

Name	E-mail	Phone/Ext.
Xing Liu	xliu@vcc.ca	6046001369
Reza Nezami	rnezami@vcc.ca	6043188274

Banner Course Name: Capstone Software Dev Project

Subject Code: CSTP - Computer Systems Technology

Course Number 2240

In Workflow

1. 4702 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/03/25 2:02 pm Xing Liu (xliu): Approved for 4702 Leader
2. 04/07/25 11:12 am Lucy Griffith (lgriffith): Approved for CTT Dean
3. 05/06/25 11:29 am Todd Rowlatt (trowlatt): Approved for Curriculum Committee

Year of Study	2nd Year Post-secondary
Credits:	4

Bridge College Code	TT
Bridge Billing Hours	5
Bridge Course Level	01

Course Description:

Students learn to work as teams on advanced group projects with ideas originated from various real-world applications, including projects from external clients. Students are exposed to all aspects of software development. Students work as teams to analyze, design, develop, test, and deploy a complete software application project.

Project team members work collaboratively on a project in an environment that resembles what is in the real software industry. A project team will follow industry practices using SDLC and agile methodology, and has weekly SCRUM meetings. Students will have experience with a working environment similar a typical IT software company.

Students will apply the knowledge and skills they acquired from previous CSTP courses. They will develop project management plans and produce analysis and design documentation. They will practice their project management, project meeting and presentation skills. They will present the final product to relevant stakeholders.

Course Pre-Requisites (if applicable):

CSTP 1210 or equivalent, taken prior to or concurrently; CSTP 2104 or equivalent, taken prior to or concurrently; CSTP 2130 or equivalent, taken prior to or concurrently; CSTP 2140 or equivalent, taken prior to or concurrently.

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

No

Course Learning
Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Work effectively in a team environment and with external clients
CLO #2	Extract project requirements from different stakeholders
CLO #3	Perform software design using different industrial tools
CLO #4	Implement software design for selected applications
CLO #5	Conduct unit tests and system tests
CLO #6	Use software versioning control tools
CLO #7	Develop user manuals
CLO #8	Manage software development projects

Instructional Strategies:

Instructional strategies include classroom lectures, demonstrations, group discussions, computer labs and hands-on practical work.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Project	30	Identify project requirements and create documentation; Carry out project design and create documentation;
Project	20	Quality of project implementation work. Tools used. Features used.
Project	10	Project Presentation.
Project	10	Project user manual.
Participation	15	Individual contributions.
Project	15	Overall project product quality.

Hours by Learning Environment Type

To complete this section:
1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.
Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 80

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:
- Lecture
- Tutorial

Hours in Category 1: 30

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:
- Lab

Hours in Category 2: 50

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Hours in Category 3:

Course Topics

Course Topics:
Project processes in a team environment
Project planning and management
Project requirements for software products
Software analysis and design
Software development using selected tools
Software version control

Course Topics:
Software testing methodologies
User manuals

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Rationale and Consultations

You only have to complete the Rationale and Consultations section once for a group of related proposals (i.e. a number of changes to a PCG and multiple courses). Is this proposal part of a group of related proposals?

Yes

Is this the primary proposal?

No

Primary Proposal

Additional Information

Provide any additional information if necessary.

Supporting documentation:

Reviewer Comments

Badge Information

NOT REQUIRED FOR GOVERNANCE APPROVAL.
For use when a Badge is offered for this course. If you have any questions, contact the Registrar's Office.

Is a Badge being offered for this course?

Badge Effective Date

Course Change Request

New Course Proposal

Date Submitted: 04/03/25 1:53 pm

Viewing: CSTP 2250 : Android Mobile App Development

Last edit: 05/06/25 10:35 am

Changes proposed by: xliu

Programs referencing this course

122: Computer Systems Technology Diploma

Course Name:
Android Mobile Application Development

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Computer Systems Technology (4702)

Contact(s)

Name	E-mail	Phone/Ext.
Xing Liu	xliu@vcc.ca	6046001369
Reza Nezami	rnezami@vcc.ca	6043188274

Banner Course Name: Android Mobile App Development

Subject Code: CSTP - Computer Systems Technology

Course Number 2250

In Workflow

1. 4702 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/03/25 2:02 pm Xing Liu (xliu): Approved for 4702 Leader
2. 04/07/25 11:12 am Lucy Griffith (lgriffith): Approved for CTT Dean
3. 05/06/25 11:29 am Todd Rowlatt (trowlatt): Approved for Curriculum Committee

Year of Study 2nd Year Post-secondary

Credits: 3

Bridge College Code	TT
Bridge Billing Hours	3
Bridge Course Level	01

Course Description:

Students learn Android mobile application development. Students will learn the Kotlin programming language and the Jetpack Compose development framework. They will learn to use the Android Studio development tool to develop mobile apps. Students will learn activities, fragments, user interface design, menus, navigation, ViewModel, threading and coroutines, data persistence and control logic implementation using Kotlin. They will learn how to publish mobile apps to an app store.

This course assumes that students already know a programming language and have basic programming skills. However, the course will teach Kotlin and students do not need to have prior knowledge of Kotlin.

Course Pre-Requisites (if applicable):

CSTP 2140 or equivalent, taken prior to or concurrently; CSTP 2150 or equivalent, taken prior to or concurrently.

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

No

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Describe the Android platform and architecture
CLO #2	Install Android development tools and setup the development environment
CLO #3	Design Android user interface and control logic for Android apps
CLO #4	Implement app user interface using Android layouts and widgets
CLO #5	Implement control logic for Android apps using Kotlin

	Upon successful completion of this course, students will be able to:
CLO #6	Use threading and coroutines to improve app performance
CLO #7	Select and implement data storage for Android apps
CLO #8	Debug and test Android apps
CLO #9	Publish Android apps

Instructional Strategies:

Instructional strategies include classroom lectures, demonstrations, group discussions, computer labs and homework assignments.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Assignments	30	Programming assignments (minimum 5)
Project	20	(individual or team) Term course project. Presented in class at the end of the term.
Midterm Exam	20	Midterm exam to access the progress and instructional effectiveness.
Final Exam	30	Final exam for overall course material assessment.

Hours by Learning Environment Type

To complete this section:
1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.
Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 60

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Hours in Category 1: 30

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Lab

Hours in Category 2: 30

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Hours in Category 3: 0

Course Topics

Course Topics:
Android platform and development tools
Kotlin data structures and functions
Jetpack Compose and Composable functions
Layouts and Lists
Navigation
State management
Data persistence
Threading and coroutines

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Rationale and Consultations

DECISION NOTE

PREPARED FOR: Education Council

DATE: May 13, 2025

ISSUE: New program: Virtual Environment and Simulation Design Diploma

BACKGROUND:
The School of Trades, Technology and Design is proposing a new program: the Virtual Environment and Simulation Design Diploma. The program will prepare graduates to create content for virtual environments, simulations, extended reality (XR) and other interactive digital experiences. These skills can be taken into a variety of industries, including healthcare, education, architecture and gaming. The School consulted with the Centre for Digital Media during the initial development of the curriculum.

The program is 60 credits long, with 18 courses taught over four terms. There are limited admission requirements: Composition 12 and Workplace Math 10. This is an intentional choice to reduce barriers to the program; feedback from industry partners highlighted that prior academic learning is not a requirement to succeed in this field. Prior learning assessment and recognition (PLAR) is available for all courses, opening up pathways for students with prior learning and experience.

DISCUSSION:
Brett Griffiths, Dean of Trades, Technology & Design, presented the proposal. Key discussion points:

- Grade 12 graduation was removed from the admission requirements to remove a barrier for students. Reducing the English language requirement below Composition 12 was discussed, but the developer was comfortable leaving it as initially proposed.
- Potential jobs/roles for graduates were added to the Program Purpose section to highlight opportunities in this new program.
- Ethics and cultural impact/representation in the program learning outcomes and throughout the program. VESD 1100 Introduction to Animation and Simulation Design includes some outcomes, and new PLO #8 was added.
- The program proposal initially included three work experience courses. At this initial stage, however, the College does not have the industry contacts to ensure work placements for students. The proposal was for students to be responsible for securing work placements on their own. While students could have replaced work experience with projects completed at VCC, there were concerns about calling the courses “work experience.” International Education also questioned whether these experiences would count as mandatory (a requirement for

international students). After the Committee meeting, these three courses were re-structured as career development courses (VESD 1220, VESD 2115, and VESD 2215).

Additional revisions were made to course learning outcomes, course descriptions and evaluation plans.

RECOMMENDATION:
THAT Education Council approve, in the form presented at this meeting, the program content guide for the new Virtual Environment and Simulation Design Diploma and 18 new course outlines, and recommend the Board of Governors approve the new credential, creation of 18 courses, and program implementation.

PREPARED BY: Todd Rowlatt, Chair, Curriculum Committee

DATE: May 5, 2025

Program Change Request

New Program Proposal

Date Submitted: 04/04/25 9:39 am

Viewing: **Virtual Environment and Simulation Design Diploma**

Last edit: 05/05/25 1:22 pm

Changes proposed by: bgriffiths

Program Name:
Virtual Environment and Simulation Design Diploma

Credential Level:	Diploma
Effective Date:	September 2026
Effective Catalog Edition:	2024-2025 Academic Calendar
School/Centre:	Trades, Technology & Design
Department	Virtual Environment and Simulation Design (4721)

Contact(s)

Name	E-mail	Phone/Ext.
Brett Griffiths	bgriffiths@vcc.ca	6048717012
Feras Ghesen	fghesen@vcc.ca	6048717110

In Workflow

1. **4721 Leader**
2. **CTT Dean**
3. **Curriculum Committee**
4. **Education Council**
5. Ministry Review
6. Board of Governors

Approval Path

1. 04/07/25 10:36 am Darija Rabadzija (drabadzija): Approved for 4721 Leader
2. 04/07/25 11:00 am Brett Griffiths (bgriffiths): Approved for CTT Dean
3. 05/05/25 2:25 pm Todd Rowlatt (trowlatt): Approved for Curriculum Committee

Program Content Guide

Purpose

The Diploma in Virtual Environment and Simulation Design prepares graduates to create content for virtual environments, simulations, extended reality (XR), and interactive digital experiences. Through hands-on training and industry-aligned projects, students develop skills in 3D modeling, real-time rendering, interactive design, and XR development. The program emphasizes professional practices and portfolio development to prepare graduates for entry-level roles as UX/UI designers, 3D modellers, developers, and other positions in industries including healthcare, education, engineering, architecture, gaming, and filmmaking.

Admission Requirements

Composition 12 with a minimum 'C-' grade or equivalent
Workplace Math 10 with a minimum 'C-' grade or equivalent

Prior Learning Assessment & Recognition (PLAR)

Students may request formal recognition of prior learning attained through informal education, work, or other life experience, including Indigenous ways of knowing. Credits may be granted to students who are able to sufficiently demonstrate the learning outcomes of specific courses.
PLAR is available for all courses. Students may complete up to 50% of the total credits of the program through PLAR and/or transfer credit. Please see individual course outlines for PLAR details. Tuition and fees apply to PLAR. Methods for assessing prior learning may include exams, portfolios, interviews, and other evaluations. If PLAR is successful, transcripts will reflect an 'S' grade (satisfactorily completed), which is not included in grade point average (GPA) calculations.
International Students should contact VCC International Education Advising to learn how PLAR can impact immigration status, prior to proceeding with the PLAR request.
See Prior Learning Assessment and Recognition policy for more information.

Program Duration & Maximum Time for Completion

This full-time program is 16 months in length (4 terms). The maximum time for completion is 5 years.

Program Learning Outcomes

	Upon successful completion of this program, graduates will be able to:
PLO #1	Create professional-quality 3D assets and environments using industry-standard tools and workflows
PLO #2	Design and develop interactive Extended Reality (XR) experiences that meet specific business or creative requirements
PLO #3	Apply principles of user experience design to virtual environments and simulations
PLO #4	Implement real-time rendering and optimization techniques for various platforms

	Upon successful completion of this program, graduates will be able to:
PLO #5	Manage projects using industry-standard practices and documentation
PLO #6	Create a professional portfolio demonstrating advanced technical and creative skills
PLO #7	Collaborate effectively in multidisciplinary teams
PLO #8	Evaluate ethical considerations in simulation design while analyzing how virtual environments and interactive media influence society, considering diverse cultural perspectives and ensuring inclusive representation in digital content creation

Additional PLO Information

Instructional Strategies, Design, and Delivery Mode

The program uses a combination of instructional strategies including:
Interactive lectures
Demonstrations
Hands-on labs
Production simulations
Problem solving exercises
Client projects
Field trips
Guest speakers
Online learning activities
Self-directed projects
Collaborative team projects
Reflective discussions

Evaluation of Student Learning

Students are evaluated through:
Practical assignments and projects
Portfolio development
Client project work
Presentations
Written assignments
Lab work
Class participation
Professional conduct
Students must receive a minimum grade of 'C' (2.00) or S in each course, and a minimum cumulative grade point average (CGPA) of 2.00 to advance into subsequent courses/terms in the program. Students must receive a minimum program grade point average of 2.00 to successfully graduate.

Recommended Characteristics of Students

Students should consider the following:
Program requires extended periods of computer use (6-8 hours per day) with sustained visual focus on digital displays, including Virtual Reality goggles.
Tasks involve precise hand-eye coordination and frequent keyboard and mouse use.

Courses

This full-time program can be completed over four (4) terms by successfully completing the following: 15 credits (term 1), 15 credits (term 2), 15 credits (term 3), 15 credits (term 4).

Plan of Study Grid

First Year		Credits
VESD 1100	Introduction to Animation and Simulation Design	3
VESD 1105	Vector Illustration	3
VESD 1110	Graphic Editing for Simulation	3
VESD 1115	Game Theory and Mechanics	3
VESD 1120	Introduction to 3-D Modelling	3
VESD 1200	Intermediate 3-D Modelling	3
VESD 1205	3D Game Engine	3
VESD 1210	Video Game Programming	3
VESD 1215	Animation and Design Portfolio	3
VESD 1220	Virtual Environment and Simulation Design Career Development	13
	Credits	30
Second Year		
VESD 2100	Advanced 3D Modelling	3
VESD 2105	Business and Marketing for Simulation Design	3

VESD 2110	Integrated 3D Production Pipeline	3
VESD 2115	Virtual Environment and Simulation Design Career Development 26	
VESD 2200	Extended Reality (XR) Content Production	3
VESD 2205	Extended Reality (XR) Environment Production	3
VESD 2210	Audio Design and Production for Animation and Simulation	3
VESD 2215	Virtual Environment and Simulation Design Career Development 36	
	Credits	30
	Total Credits	60

The evaluation of learning outcomes for each student is prepared by the instructor and reported to the Student Records Department at the completion of semesters.
The transcript typically shows a letter grade for each course. The grade point equivalent for a course is obtained from letter grades as follows:

Grading Standard

Grade	Percentage	Description	Grade Point Equivalency
A+	96-100		4.33
A	91-95		4.00
A-	86-90		3.67
B+	81-85		3.33
B	76-80		3.00
B-	71-75		2.67
C+	66-70		2.33
C	61-65	Minimum Progression Grade	2.00
C-	56-60		1.67
D	50-55		1.00
F	0-49	Failing Grade	0.00
S	61 or greater	Satisfactory – student has met and mastered a clearly defined body of skills and performances to required standards	N/A
U		Unsatisfactory – student has not met and mastered a clearly defined body of skills and performances to required standards	N/A
I		Incomplete	N/A
IP		Course in Progress	N/A
W		Withdrawal	N/A
Course Standings			
R		Audit. No Credits	N/A
EX		Exempt. Credit Granted	N/A
TC		Transfer Credit	N/A

Grade Point Average (GPA)

The course grade points shall be calculated as the product of the course credit value and the grade value.
The GPA shall be calculated by dividing the total number of achieved course grade points by the total number of assigned course credit values. This cumulative GPA shall be determined and stated on the Transcript at the end of each Program level or semester.
Grades shall be assigned to repeated courses in the same manner as courses taken only once. For the purpose of GPA calculation of grades for repeated courses, they will be included in the calculation of the cumulative GPA

Rationale and Consultations

Provide a rationale for this proposal.

See concept paper

Are there any expected costs to this proposal.

See concept paper

Consultations

Consultated Area	Consultation Comments
Centre for Teaching, Learning, and Research (CTLR)	See uploaded excel document
Registrar's Office	See uploaded excel document
Disability Services	See uploaded excel document
Financial Aid	See uploaded excel document
Indigenous Education & Community Engagement (IECE)	See uploaded excel document
Learning Centre	See uploaded excel document
International Education	See uploaded excel document
Marketing & Communications	See uploaded excel document
Finance	See uploaded excel document
Information Technology (IT)	See uploaded excel document
Safety & Security	See uploaded excel document
Institutional Research (IR)	See uploaded excel document

Additional Information

Provide any additional information if necessary.

Supporting documentation:

Feedback and Comments- VCC.xlsx

Course Change Request

New Course Proposal

Date Submitted: 04/04/25 9:02 am

Viewing: VESD 1100 : Intro to Anim and Sim Design

Last edit: 04/24/25 10:26 am

Changes proposed by: bgriffiths

Programs referencing this course

236: Virtual Environment and Simulation Design Diploma

Course Name:
Introduction to Animation and Simulation Design

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Virtual Environment and Simulation Design (4721)

Contact(s)

Name	E-mail	Phone/Ext.
Brett Griffiths	bgriffiths@vcc.ca	6048717012
Feras Ghesen	fghesen@vcc.ca	6048717110

Banner Course Name: Intro to Anim and Sim Design

Subject Code:

In Workflow

1. 4721 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/07/25 10:36 am Darija Rabadzija (drabadzija): Approved for 4721 Leader
2. 04/07/25 11:00 am Brett Griffiths (bgriffiths): Approved for CTT Dean
3. 05/05/25 2:26 pm Todd Rowlatt (trowlatt): Approved for Curriculum Committee

VESD - Virtual Environment and Simulation Design

Course Number 1100

Year of Study 1st Year Post-secondary

Credits: 3

Bridge College Code

Bridge Billing Hours

Bridge Course Level

Course Description:

This course provides foundation skills necessary in the simulation design industry, covering safety, ethical issues, video game history, career opportunities, and the social impact of gaming. Students will explore the principles of animation and their practical application in various contexts. Through hands-on projects, students will demonstrate proficiency with animation software by creating an original content portfolio.

Course Pre-Requisites (if applicable):

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes

Details of PLAR:

Methods of assessment may include a challenge exam, submission of a product or portfolio for review, or a practical demonstration. Please contact the Department for details.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Explain the historical development of the video game industry through a chronological analysis of key milestones and innovations.
CLO #2	Evaluate ethical considerations in the simulation design industry by examining current professional standards.

	Upon successful completion of this course, students will be able to:
CLO #3	Analyze how simulations impact society through examination of cultural, educational, and entertainment applications.
CLO #4	Identify career opportunities within the animation and simulation industry by researching job roles, required skills, and industry growth trends.
CLO #5	Apply the twelve principles of animation in the creation of original animated sequences using industry-standard software.

Instructional Strategies:

A combination of lecture, demonstration, production simulations, problem solving, practical labs and reflective discussion will be used throughout this course.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Participation	10	
Lab Work	30	May include in-class exercises, assignments, quizzes/tests, and work-in progress
Project	30	
Assignments	30	

Hours by Learning Environment Type

To complete this section:
1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.
Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 54

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Online

Hours in Category 1: 42

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Hours in Category 2:

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Self-Paced

Hours in Category 3: 12

Course Topics

Course Topics:
The Evolution of the Video Game Industry
Ethics in Game and Simulation Design
The Societal Impact of Simulations
Careers in Animation and Simulation
The Twelve Principles of Animation
The Role of Technology in Simulation and Animation
Ethical Game Design Case Studies
Simulations as Tools for Social Change

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Rationale and Consultations

Course Change Request

New Course Proposal

Date Submitted: 04/04/25 9:02 am

Viewing: VESD 1105 : Vector Illustration

Last edit: 04/24/25 10:26 am

Changes proposed by: bgriffiths

Programs referencing this course

236: Virtual Environment and Simulation Design Diploma

Course Name:
Vector Illustration

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Virtual Environment and Simulation Design (4721)

Contact(s)

Name	E-mail	Phone/Ext.
Brett Griffiths	bgriffiths@vcc.ca	6048717012
Feras Ghesen	fghesen@vcc.ca	6048717110

Banner Course Name: Vector Illustration

Subject Code:

In Workflow

1. 4721 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/07/25 10:36 am Darija Rabadzija (drabadzija): Approved for 4721 Leader
2. 04/07/25 11:00 am Brett Griffiths (bgriffiths): Approved for CTT Dean
3. 05/05/25 2:26 pm Todd Rowlatt (trowlatt): Approved for Curriculum Committee

VESD - Virtual Environment and Simulation Design

Course Number 1105

Year of Study 1st Year Post-secondary

Credits: 3

Bridge College Code

Bridge Billing Hours

Bridge Course Level

Course Description:

This course explores the fundamentals of visual design elements and their practical application in digital illustration. Students will develop technical skills with vector-based illustration software while creating original artwork. Emphasis will be placed on comprehensive layer control, gradients, blends, and various illustration tools to prepare students for industry-standard production workflows.

Course Pre-Requisites (if applicable):

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes

Details of PLAR:

Methods of assessment may include a challenge exam, submission of a product or portfolio for review, or a practical demonstration. Please contact the Department for details.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Apply the elements of visual design when creating digital illustrations for various media applications.
CLO #2	Implement basic principles and methods of drawing in digital and graphic design projects using vector-based tools.

	Upon successful completion of this course, students will be able to:
CLO #3	Utilize basic principles, techniques, and media used in digital and traditional illustration styles when developing creative assets.
CLO #4	Operate illustration software to create professional-quality artistic renderings for digital media projects.
CLO #5	Demonstrate vector drawing and painting techniques by creating original digital artwork with appropriate tool selection.
CLO #6	Implement the design/creative process when developing "real world" illustration projects from concept to completion.
CLO #7	Use comprehensive layer management, gradient application, and blending techniques to create original illustrations using industry-standard tools.
CLO #8	Distinguish between various file formats and export pipelines when preparing illustrations for different digital platforms.

Instructional Strategies:

A combination of lecture, demonstration, production simulations, problem solving, practical labs and reflective discussion will be used throughout this course.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Participation	10	
Lab Work	30	May include in-class exercises, assignments, quizzes/tests, and work-in progress
Project	30	
Assignments	30	

Hours by Learning Environment Type

To complete this section:

1. Enter the total course hours.

2. Check all instruction types that could be applicable for this course.

3. Breakdown the total hours into each relevant category where instruction types are selected.

Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 54

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Online

Hours in Category 1: 42

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Hours in Category 2:

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Self-Paced

Hours in Category 3: 12

Course Topics

Course Topics:
Fundamentals of Visual Design
Introduction to Drawing Techniques for Digital and Graphic Design
Traditional vs. Digital Illustration Styles
Illustration Software Basics: Tools and Interface
Vector Drawing and Artistic Rendering
The Design Process: From Concept to Final Illustration
Advanced Layer Management and Illustration Techniques
File Formats and Export Pipelines for Illustrators

Course Change Request

New Course Proposal

Date Submitted: 04/04/25 9:02 am

Viewing: VESD 1110 : Graphic Editing for Simulation

Last edit: 04/24/25 10:26 am

Changes proposed by: bgriffiths

Programs referencing this course

236: Virtual Environment and Simulation Design Diploma

Course Name:
Graphic Editing for Simulation

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Virtual Environment and Simulation Design (4721)

Contact(s)

Name	E-mail	Phone/Ext.
Brett Griffiths	bgriffiths@vcc.ca	6048717012
Feras Ghesen	fghesen@vcc.ca	6048717110

Banner Course Name: Graphic Editing for Simulation

Subject Code:

In Workflow

1. 4721 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/07/25 10:36 am Darija Rabadzija (drabadzija): Approved for 4721 Leader
2. 04/07/25 11:00 am Brett Griffiths (bgriffiths): Approved for CTT Dean
3. 05/05/25 2:26 pm Todd Rowlatt (trowlatt): Approved for Curriculum Committee

VESD - Virtual Environment and Simulation Design

Course Number 1110

Year of Study 1st Year Post-secondary

Credits: 3

Bridge College Code

Bridge Billing Hours

Bridge Course Level

Course Description:

This course explores image composition and visual design elements essential for game development, including the use of photo editing software for image manipulation and enhancement. Students will master advanced editing techniques to create visual effects, textures, and materials for digital media projects. Through practical application, students will learn to incorporate dynamic and interactive media elements across various simulation platforms.

Course Pre-Requisites (if applicable):

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes

Details of PLAR:

Methods of assessment may include a challenge exam, submission of a product or portfolio for review, or a practical demonstration. Please contact the Department for details.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Apply principles of visual design in photographic media when creating and editing images for simulation environments.

	Upon successful completion of this course, students will be able to:
CLO #2	Utilize photo editing software to enhance and manipulate digital images for integration into visual design projects.
CLO #3	Implement advanced editing techniques when creating composite images for digital simulation assets.
CLO #4	Create and edit digital visual effects using layering and masking tools in professional image editing software.
CLO #5	Design 3D textures and materials for digital media by applying appropriate color theory and texture mapping techniques.
CLO #6	Incorporate dynamic and interactive media elements when developing engaging visual content for simulations.

Instructional Strategies:

A combination of lecture, demonstration, production simulations, problem solving, practical labs and reflective discussion will be used throughout this course.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Participation	10	
Lab Work	30	May include in-class exercises, assignments, quizzes/tests, and work-in progress
Project	30	
Assignments	30	

Hours by Learning Environment Type

To complete this section:

1. Enter the total course hours.

2. Check all instruction types that could be applicable for this course.

3. Breakdown the total hours into each relevant category where instruction types are selected.

Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 54

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Online

Hours in Category 1: 42

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Hours in Category 2:

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Self-Paced

Hours in Category 3: 12

Course Topics

Course Topics:
Principles of Visual Design in Photography
Introduction to Photo Editing Software
Advanced Layering and Masking Techniques
Colour Theory and Application in Digital Media
Special Effects and Dynamic Editing Features
3D Texture Design and UV Mapping
Brush Creation and Customization
Video and Animation Features in Image Editing

Course Change Request

New Course Proposal

Date Submitted: 04/04/25 9:02 am

Viewing: VESD 1115 : Game Theory and Mechanics

Last edit: 04/24/25 10:27 am

Changes proposed by: bgriffiths

Programs referencing this course

236: Virtual Environment and Simulation Design Diploma

Course Name:
Game Theory and Mechanics

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Virtual Environment and Simulation Design (4721)

Contact(s)

Name	E-mail	Phone/Ext.
Brett Griffiths	bgriffiths@vcc.ca	6048717012
Feras Ghesen	fghesen@vcc.ca	6048717110

Banner Course Name: Game Theory and Mechanics

Subject Code:

In Workflow

1. 4721 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/07/25 10:36 am Darija Rabadzija (drabadzija): Approved for 4721 Leader
2. 04/07/25 11:00 am Brett Griffiths (bgriffiths): Approved for CTT Dean
3. 05/05/25 2:26 pm Todd Rowlatt (trowlatt): Approved for Curriculum Committee

VESD - Virtual Environment and Simulation Design

Course Number 1115

Year of Study 1st Year Post-secondary

Credits: 3

Bridge College Code

Bridge Billing Hours

Bridge Course Level

Course Description:

This course introduces students to game design theory, mechanics, and development applications within the simulation industry. Students will learn to apply design principles and techniques to create effective user interfaces and functional 2D game assets. Through collaborative projects, students will develop prototypes, implement game mechanics, and compile deployable games for multiple platforms.

Course Pre-Requisites (if applicable):

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes

Details of PLAR:

Methods of assessment may include a challenge exam, submission of a product or portfolio for review, or a practical demonstration. Please contact the Department for details.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Analyze software and tools used in game design by evaluating their capabilities and limitations for specific project requirements.
CLO #2	Explain game design principles and current trends through the analysis of successful commercial games and industry innovations.

	Upon successful completion of this course, students will be able to:
CLO #3	Apply design principles to create effective user interfaces that enhance player experience and game functionality.
CLO #4	Develop prototypes and implement mechanics in 2D game engines by applying programming concepts and game logic.
CLO #5	Collaborate with team members to design and implement functional 2D games using agile development methodologies.
CLO #6	Compile and deploy game projects for multiple platforms by utilizing appropriate build settings and optimization techniques.

Instructional Strategies:

A combination of lecture, demonstration, production simulations, problem solving, practical labs and reflective discussion will be used throughout this course.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Participation	10	
Lab Work	30	May include in-class exercises, assignments, quizzes/tests, and work-in progress
Project	30	
Assignments	30	

Hours by Learning Environment Type

To complete this section:

1. Enter the total course hours.

2. Check all instruction types that could be applicable for this course.

3. Breakdown the total hours into each relevant category where instruction types are selected.

Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 54

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Online

Hours in Category 1: 42

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Hours in Category 2:

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Self-Paced

Hours in Category 3: 12

Course Topics

Course Topics:
Introduction to Game Design Software and Hardware
Digital Animation Tools and Techniques
Graphic Editing for Game Content Creation
2D Game Engines and Prototyping
Game Design Principles and Rules of Play
User Interface Design for Games
Game Development Teamwork and Collaboration
Game Compilation and Multi-Platform Deployment

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Course Change Request

New Course Proposal

Date Submitted: 04/04/25 9:02 am

Viewing: VESD 1120 : Introduction to 3-D Modelling

Last edit: 04/24/25 10:27 am

Changes proposed by: bgriffiths

Programs referencing this course

236: Virtual Environment and Simulation Design Diploma

Course Name:
Introduction to 3-D Modelling

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Virtual Environment and Simulation Design (4721)

Contact(s)

Name	E-mail	Phone/Ext.
Brett Griffiths	bgriffiths@vcc.ca	6048717012
Feras Ghesen	fghesen@vcc.ca	6048717110

Banner Course Name: Introduction to 3-D Modelling

Subject Code:

In Workflow

1. 4721 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/07/25 10:36 am Darija Rabadzija (drabadzija): Approved for 4721 Leader
2. 04/07/25 11:00 am Brett Griffiths (bgriffiths): Approved for CTT Dean
3. 05/05/25 2:26 pm Todd Rowlatt (trowlatt): Approved for Curriculum Committee

VESD - Virtual Environment and Simulation Design

Course Number 1120

Year of Study 1st Year Post-secondary

Credits: 3

Bridge College Code

Bridge Billing Hours

Bridge Course Level

Course Description:

This course introduces students to professional 3D modeling software for creating polygon-based assets essential in game design and extended reality (XR) projects. Students will develop technical skills in geometric visualization, effective software workflow, and primitive geometry manipulation. The course culminates with students producing a themed scene containing a minimum of five original 3D modeled objects.

Course Pre-Requisites (if applicable):

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes

Details of PLAR:

Methods of assessment may include a challenge exam, submission of a product or portfolio for review, or a practical demonstration. Please contact the Department for details.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Use design visualization software to create 3D models suitable for games and extended reality applications.

	Upon successful completion of this course, students will be able to:
CLO #2	Interact with design visualization software by navigating interfaces and utilizing appropriate tools for efficient workflow.
CLO #3	Set up an environment for working with design visualization software and create objects using primitive geometry for basic 3D asset creation.
CLO #4	Design, create, and analyze geometric visual components of games by applying principles of 3D modelling and topology.
CLO #5	Produce a themed-scene including at least five original modelled 3D objects that demonstrate proper modelling techniques and scene composition.

Instructional Strategies:

A combination of lecture, demonstration, production simulations, problem solving, practical labs and reflective discussion will be used throughout this course.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Participation	10	
Lab Work	30	May include in-class exercises, assignments, quizzes/tests, and work-in progress
Project	30	
Assignments	30	

Hours by Learning Environment Type

To complete this section:

1. Enter the total course hours.

2. Check all instruction types that could be applicable for this course.

3. Breakdown the total hours into each relevant category where instruction types are selected.

Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 54

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Online

Hours in Category 1: 42

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Hours in Category 2:

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Self-Paced

Hours in Category 3: 12

Course Topics

Course Topics:
Introduction to Design Visualization Software
File Management and Workflow Efficiency
Navigating the Design Visualization Interface
Fundamentals of Primitive Geometry and Topology
Geometric Manipulation and Object Creation
Modelling from Reference Images
Scene Development and Environment Creation
Analyzing and Evaluating 3D Models for Simulation and XR

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Course Change Request

New Course Proposal

Date Submitted: 04/04/25 9:02 am

Viewing: VESD 1200 : Intermediate 3-D Modelling

Last edit: 04/24/25 10:24 am

Changes proposed by: bgriffiths

Programs referencing this course

236: Virtual Environment and Simulation Design Diploma

Course Name:
Intermediate 3-D Modelling

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Virtual Environment and Simulation Design (4721)

Contact(s)

Name	E-mail	Phone/Ext.
Brett Griffiths	bgriffiths@vcc.ca	6048717012
Feras Ghesen	fghesen@vcc.ca	6048717110

Banner Course Name: Intermediate 3-D Modelling

Subject Code:

In Workflow

1. 4721 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/07/25 10:36 am Darija Rabadzija (drabadzija): Approved for 4721 Leader
2. 04/07/25 11:00 am Brett Griffiths (bgriffiths): Approved for CTT Dean
3. 05/05/25 2:25 pm Todd Rowlatt (trowlatt): Approved for Curriculum Committee

VESD - Virtual Environment and Simulation Design

Course Number 1200

Year of Study 1st Year Post-secondary

Credits: 3

Bridge College Code

Bridge Billing Hours

Bridge Course Level

Course Description:

In this course, students will learn about materials, textures, lighting, and rendering as it relates to developing assets for use in gaming and extended reality (XR) projects.

Course Pre-Requisites (if applicable):

VESD 1120.

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes

Details of PLAR:

Methods of assessment may include a challenge exam, submission of a product or portfolio for review, or a practical demonstration. Please contact the Department for details.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Demonstrate foundational knowledge of materials, textures, lighting, and shader networks when creating realistic 3D scenes.
CLO #2	Apply principles of light interaction and rendering to simulate realistic materials within 3D environments and character models.

	Upon successful completion of this course, students will be able to:
CLO #3	Demonstrate proficiency in UV mapping and texturing techniques when preparing 3D objects for material application.
CLO #4	Design and implement node-based shader networks to create advanced texturing and lighting effects in 3D projects.
CLO #5	Produce rendered still images suitable for various professional applications by applying appropriate lighting and camera techniques.
CLO #6	Evaluate and integrate lighting techniques to enhance the realism and functionality of 3D scenes within game and simulation environments.

Instructional Strategies:

A combination of lecture, demonstration, production simulations, problem solving, practical labs and reflective discussion will be used throughout this course.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Participation	10	
Lab Work	30	May include in-class exercises, assignments, quizzes/tests, and work-in progress
Project	30	
Assignments	30	

Hours by Learning Environment Type

To complete this section:

1. Enter the total course hours.

2. Check all instruction types that could be applicable for this course.

3. Breakdown the total hours into each relevant category where instruction types are selected.

Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 54

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Online

Hours in Category 1: 42

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Hours in Category 2:

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Self-Paced

Hours in Category 3: 12

Course Topics

Course Topics:
Introduction to Materials and Shaders
Procedural Materials and Physically-Based Rendering (PBR)
Light Interaction and Material Simulation
Texturing Techniques and Tools
UV Mapping and Texture Application
Node-Based Shader Creation
Rendering Techniques for Still Images
Lighting Principles in 3D Design

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Course Change Request

New Course Proposal

Date Submitted: 04/04/25 8:59 am

Viewing: VESD 1205 : 3D Game Engine

Last edit: 04/24/25 10:27 am

Changes proposed by: bgriffiths

Programs referencing this course

236: Virtual Environment and Simulation Design Diploma

Course Name: 3D Game Engine

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Virtual Environment and Simulation Design (4721)

Contact(s)

Name	E-mail	Phone/Ext.
Brett Griffiths	bgriffiths@vcc.ca	6048717012
Feras Ghesen	fghesen@vcc.ca	6048717110

Banner Course Name: 3D Game Engine

Subject Code:

In Workflow

1. 4721 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/07/25 10:36 am Darija Rabadzija (drabadzija): Approved for 4721 Leader
2. 04/07/25 11:00 am Brett Griffiths (bgriffiths): Approved for CTT Dean
3. 05/05/25 2:25 pm Todd Rowlatt (trowlatt): Approved for Curriculum Committee

VESD - Virtual Environment and Simulation Design

Course Number 1205

Year of Study 1st Year Post-secondary

Credits: 3

Bridge College Code

Bridge Billing Hours

Bridge Course Level

Course Description:

This course examines advanced 3D modeling techniques focused on materials, textures, lighting, and rendering for gaming and extended reality (XR) projects. Students will develop proficiency in UV mapping, texturing techniques, and implementing node-based shader networks for advanced visual effects. Through practical application, students will produce rendered images suitable for various professional applications while evaluating lighting techniques to enhance realism in 3D scenes.

Course Pre-Requisites (if applicable):

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes

Details of PLAR:

Methods of assessment may include a challenge exam, submission of a product or portfolio for review, or a practical demonstration. Please contact the Department for details.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Analyze the fundamental components of 3D game engines when evaluating their capabilities for specific game development projects.

	Upon successful completion of this course, students will be able to:
CLO #2	Explain and use game engine tools and features when creating interactive gameplay elements and systems.
CLO #3	Design and develop interactive game environments by applying level design principles and spatial composition techniques.
CLO #4	Integrate game assets and mechanics into interactive environments when building coherent gameplay experiences with appropriate difficulty progression.
CLO #5	Implement audio and visual effects in game environments to enhance player immersion and provide meaningful feedback.
CLO #6	Publish and deploy 3D game projects for multiple platforms by utilizing appropriate optimization techniques and platform-specific requirements.

Instructional Strategies:

A combination of lecture, demonstration, production simulations, problem solving, practical labs and reflective discussion will be used throughout this course.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Participation	10	
Lab Work	30	May include in-class exercises, assignments, quizzes/tests, and work-in progress
Project	30	
Assignments	30	

Hours by Learning Environment Type

To complete this section:

1. Enter the total course hours.

2. Check all instruction types that could be applicable for this course.

3. Breakdown the total hours into each relevant category where instruction types are selected.

Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 54

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Online

Hours in Category 1: 42

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Hours in Category 2:

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Self-Paced

Hours in Category 3: 12

Course Topics

Course Topics:
Introduction to 3D Game Engines
Core Mechanics and Tools in Game Engines
Game Environment Planning and Prototyping
Asset Integration and Customization
Game Logic and Interactivity
Audio Integration in 3D Game Environments
Visual Effects and Atmosphere Creation
Deployment and Platform Optimization

Course Change Request

New Course Proposal

Date Submitted: 04/04/25 9:03 am

Viewing: VESD 1210 : Video Game Programming

Last edit: 04/24/25 10:28 am

Changes proposed by: bgriffiths

Programs referencing this course

236: Virtual Environment and Simulation Design Diploma

Course Name:
Video Game Programming

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Virtual Environment and Simulation Design (4721)

Contact(s)

Name	E-mail	Phone/Ext.
Brett Griffiths	bgriffiths@vcc.ca	6048717012
Feras Ghesen	fghesen@vcc.ca	6048717110

Banner Course Name: Video Game Programming

Subject Code:

In Workflow

1. 4721 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/07/25 10:36 am Darija Rabadzija (drabadzija): Approved for 4721 Leader
2. 04/07/25 11:00 am Brett Griffiths (bgriffiths): Approved for CTT Dean
3. 05/05/25 2:25 pm Todd Rowlatt (trowlatt): Approved for Curriculum Committee

VESD - Virtual Environment and Simulation Design

Course Number 1210

Year of Study 1st Year Post-secondary

Credits: 3

Bridge College Code

Bridge Billing Hours

Bridge Course Level

Course Description:

This course introduces programming fundamentals and their practical application in game development processes. Students will learn to construct algorithms, utilize programming structures, and develop logical solutions for interactive applications. Through hands-on exercises, students will create practical applications and generate appropriate output and reports for game development contexts.

Course Pre-Requisites (if applicable):

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes

Details of PLAR:

Methods of assessment may include a challenge exam, submission of a product or portfolio for review, or a practical demonstration. Please contact the Department for details.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Explain programming fundamentals by demonstrating knowledge of syntax, data types, and control structures in a game development context.
CLO #2	Develop and test programs by writing code, debugging issues, and implementing solutions for game functionality.

	Upon successful completion of this course, students will be able to:
CLO #3	Construct algorithms and logical solutions when solving common game programming challenges.
CLO #4	Utilize programming structures to create efficient and maintainable code for game mechanics and systems.
CLO #5	Create practical applications by implementing programming solutions that address specific game development requirements.
CLO #6	Generate output and reports to track game states and provide user feedback through appropriate interface elements.

Instructional Strategies:

A combination of lecture, demonstration, production simulations, problem solving, practical labs and reflective discussion will be used throughout this course.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Participation	10	
Lab Work	30	May include in-class exercises, assignments, quizzes/tests, and work-in progress
Project	30	
Assignments	30	

Hours by Learning Environment Type

To complete this section:
1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.
Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 54

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Online

Hours in Category 1: 42

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Hours in Category 2:

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Self-Paced

Hours in Category 3: 12

Course Topics

Course Topics:
Introduction to Programming and Development Cycle
Algorithms and Problem-Solving Techniques
Control Structures and Logic Implementation
Data Structures and String Manipulation
Program Development and Debugging
Practical Applications in Programming
Generating screen output and formatted reports

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Rationale and Consultations

Course Change Request

New Course Proposal

Date Submitted: 04/04/25 9:01 am

Viewing: **VESD 1215 : Animation and Design Portfolio**

Last edit: 04/24/25 10:28 am

Changes proposed by: bgriffiths

Programs referencing this course

236: Virtual Environment and Simulation Design Diploma

Course Name:
Animation and Design Portfolio

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Virtual Environment and Simulation Design (4721)

Contact(s)

Name	E-mail	Phone/Ext.
Brett Griffiths	bgriffiths@vcc.ca	6048717012
Feras Ghesen	fghesen@vcc.ca	6048717110

Banner Course Name: Animation and Design Portfolio

Subject Code:

In Workflow

1. 4721 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/07/25 10:36 am Darija Rabadzija (drabadzija): Approved for 4721 Leader
2. 04/07/25 11:00 am Brett Griffiths (bgriffiths): Approved for CTT Dean
3. 05/05/25 2:25 pm Todd Rowlatt (trowlatt): Approved for Curriculum Committee

VESD - Virtual Environment and Simulation Design

Course Number 1215

Year of Study 1st Year Post-secondary

Credits: 3

Bridge College Code

Bridge Billing Hours

Bridge Course Level

Course Description:

This culminating course guides students through creating a professional digital portfolio featuring refined projects from previous courses. Students will develop and implement a comprehensive portfolio strategy including planning, production, revision, and final publication of their work. The course emphasizes creating a dynamic "sizzle reel" video that showcases students' technical abilities and creative accomplishments for potential employers.

Course Pre-Requisites (if applicable):

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes

Details of PLAR:

Methods of assessment may include a challenge exam, submission of a product or portfolio for review, or a practical demonstration. Please contact the Department for details.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Develop an online portfolio plan by identifying target audiences, personal brand elements, and platform requirements.

	Upon successful completion of this course, students will be able to:
CLO #2	Curate portfolio content by selecting and organizing work samples that demonstrate technical skills and creative abilities.
CLO #3	Demonstrate project management skills when revising existing projects and creating new content under deadline conditions.
CLO #4	Create a dynamic "sizzle reel" video that showcases animation and design skills through engaging visual storytelling.
CLO #5	Refine and finalize the portfolio by incorporating peer and instructor feedback to improve presentation quality.
CLO #6	Launch and optimize the media portfolio by implementing search engine optimization and social media integration strategies.

Instructional Strategies:

A combination of lecture, demonstration, production simulations, problem solving, practical labs and reflective discussion will be used throughout this course.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Project	25	Revised project 1
Project	25	Revised project 2
Project	25	Revised project 3
Assignments	25	Sizzle reel

Hours by Learning Environment Type

To complete this section:

1. Enter the total course hours.

2. Check all instruction types that could be applicable for this course.

3. Breakdown the total hours into each relevant category where instruction types are selected.

Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 54

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Online

Hours in Category 1: 42

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Hours in Category 2:

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Self-Paced

Hours in Category 3: 12

Course Topics

Course Topics:
Introduction to Media Portfolios
Portfolio Analysis and Conceptualization
Content Selection and Preparation
Time Management for Creative Projects
Sizzle Reel Video Production
Portfolio Revision and Feedback Integration
Testing and Optimization
Portfolio Launch and Maintenance

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Rationale and Consultations

Course Change Request

New Course Proposal

Date Submitted: 04/04/25 9:03 am

Viewing: VESD 1220 : Virtual Env & Sim Career Dev 1

Last edit: 05/02/25 4:03 pm

Changes proposed by: bgriffiths

Programs referencing this course

236: Virtual Environment and Simulation Design Diploma

Course Name:
Virtual Environment and Simulation Design Career Development 1

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Virtual Environment and Simulation Design (4721)

Contact(s)

Name	E-mail	Phone/Ext.
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Banner Course Name: Virtual Env & Sim Career Dev 1

Subject Code:

In Workflow

1. 4721 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/07/25 10:36 am Darija Rabadzija (drabadzija): Approved for 4721 Leader
2. 04/07/25 11:00 am Brett Griffiths (bgriffiths): Approved for CTT Dean
3. 05/05/25 2:25 pm Todd Rowlatt (trowlatt): Approved for Curriculum Committee

VESD - Virtual Environment and Simulation Design

Course Number 1220

Year of Study 1st Year Post-secondary

Credits: 3

Bridge College Code

Bridge Billing Hours

Bridge Course Level

Course Description:

This introductory career development course guides students in applying program skills through pursuing work experience in the virtual environment and simulation design field. Students will develop essential job search techniques to identify appropriate work opportunities while establishing personalized learning objectives for professional growth. Through structured reflection and hands-on experience, students will develop fundamental communication, collaboration, project management, and team cooperation skills necessary for success in the digital media industry.

Course Pre-Requisites (if applicable):

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes

Details of PLAR:

Methods of assessment may include a challenge exam, submission of a product or portfolio for review, or a practical demonstration. Please contact the Department for details.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Apply job search techniques to identify appropriate work opportunities.
CLO #2	Develop learning objectives related to various job experiences.

	Upon successful completion of this course, students will be able to:
CLO #3	Reflect on work-related experiences and learning objectives.
CLO #4	Develop effective communication, collaboration, project management, team cooperation, and research-related skills.

Instructional Strategies:

This course will be delivered online and will include a combination of discussions, assignments, reflections, and live synchronous sessions.

Evaluation and Grading

Grading System: Satisfactory/Unsatisfactory Passing grade: S (61%)

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Participation	25	Active engagement in online discussions, peer feedback sessions, and career development workshops
Assignments	30	Job search portfolio (resume, cover letter, online professional profile), and job application packages
Project	25	Career pathway mapping project with industry analysis and personal skill alignment
Reflection	20	Structured reflection journals, learning objectives documentation, and self-assessment of professional growth

Hours by Learning Environment Type

To complete this section:

1. Enter the total course hours.

2. Check all instruction types that could be applicable for this course.

3. Breakdown the total hours into each relevant category where instruction types are selected.

Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 74

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Online

Hours in Category 1: 14

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Hours in Category 2:

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Self-Paced

Hours in Category 3: 60

Course Topics

Course Topics:
Resume
Cover letter
Job search
Work experience
Interview skills
Networking
Communication
Time management
Teamwork

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Course Change Request

New Course Proposal

Date Submitted: 04/04/25 9:01 am

Viewing: VESD 2100 : Advanced 3D Modelling

Last edit: 04/24/25 10:29 am

Changes proposed by: bgriffiths

Programs referencing this course

236: Virtual Environment and Simulation Design Diploma

Course Name:
Advanced 3D Modelling

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Virtual Environment and Simulation Design (4721)

Contact(s)

Name	E-mail	Phone/Ext.
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Feras Ghesen	fghesen@vcc.ca	6048717110

Banner Course Name: Advanced 3D Modelling

Subject Code:

In Workflow

1. **4721 Leader**
2. **CTT Dean**
3. **Curriculum Committee**
4. **Education Council**
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/07/25 10:36 am Darija Rabadzija (drabadzija): Approved for 4721 Leader
2. 04/07/25 11:00 am Brett Griffiths (bgriffiths): Approved for CTT Dean
3. 05/05/25 2:25 pm Todd Rowlatt (trowlatt): Approved for Curriculum Committee

VESD - Virtual Environment and Simulation Design

Course Number 2100

Year of Study 2nd Year Post-secondary

Credits: 3

Bridge College Code

Bridge Billing Hours

Bridge Course Level

Course Description:

This advanced course explores design principles and techniques for planning, designing, and producing simulations with animation. Students will analyze animation history, principles, and character development while applying advanced animation tools and techniques. The course culminates with students creating and optimizing character animations specifically tailored for games and extended reality (XR) projects.

Course Pre-Requisites (if applicable):

VESD 1200.

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes

Details of PLAR:

Methods of assessment may include a challenge exam, submission of a product or portfolio for review, or a practical demonstration. Please contact the Department for details.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Analyze the history and principles of animation by examining influential works and technical innovations.
CLO #2	Apply animation techniques and principles when creating fluid character and object movement in 3D environments.

	Upon successful completion of this course, students will be able to:
CLO #3	Integrate animation tools and techniques during production of complex animated sequences for games and simulations.
CLO #4	Develop and animate characters by applying rigging techniques and creating natural movement patterns.
CLO #5	Create and optimize character animations for games and XR projects by implementing efficient keyframing and weight painting.
CLO #6	Examine character development and mechanics through analysis of industry best practices and performance requirements.

Instructional Strategies:

A combination of lecture, demonstration, production simulations, problem solving, practical labs and reflective discussion will be used throughout this course.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Participation	10	
Lab Work	30	
Project	30	
Assignments	30	

Hours by Learning Environment Type

To complete this section:
1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.
Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 54

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Online

Hours in Category 1: 42

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Hours in Category 2:

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Self-Paced

Hours in Category 3: 12

Course Topics

Course Topics:
History and Evolution of Animation
Fundamentals of Animation Principles
Keyframe Animation and Timing
Tools and Techniques for Animation Production
Character Pre-Visualization and Development
Advanced Character Modelling and Sculpting
Character Animation for Games and XR
Character Mechanics and Interaction

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Rationale and Consultations

Course Change Request

New Course Proposal

Date Submitted: 04/04/25 9:01 am

Viewing: VESD 2105 : Bus & Marketing for Sim Design

Last edit: 04/24/25 10:30 am

Changes proposed by: bgriffiths

Programs referencing this course

236: Virtual Environment and Simulation Design Diploma

In Workflow

1. 4721 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/07/25 10:36 am Darija Rabadzija (drabadzija): Approved for 4721 Leader
2. 04/07/25 11:00 am Brett Griffiths (bgriffiths): Approved for CTT Dean
3. 05/05/25 2:25 pm Todd Rowlatt (trowlatt): Approved for Curriculum Committee

Course Name:
Business and Marketing for Simulation Design

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Virtual Environment and Simulation Design (4721)

Contact(s)

Name	E-mail	Phone/Ext.
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Banner Course Name: Bus & Marketing for Sim Design

Subject Code:

VESD - Virtual Environment and Simulation Design

Course Number 2105

Year of Study 2nd Year Post-secondary

Credits: 3

Bridge College Code

Bridge Billing Hours

Bridge Course Level

Course Description:

This course identifies industry roles, team structures, and development processes within the simulation design field while teaching essential project and time management skills. Students will explore audience knowledge, target marketing, consumer behavior, and economics of the video game industry. Emphasis will be placed on quality assurance processes and developing professional application materials for employment in the simulation industry.

Course Pre-Requisites (if applicable):

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes

Details of PLAR:

Methods of assessment may include a challenge exam, submission of a product or portfolio for review, or a practical demonstration. Please contact the Department for details.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Explain roles, responsibilities, and processes in simulation development by examining organizational structures and workflow patterns.

	Upon successful completion of this course, students will be able to:
CLO #2	Apply project and time management skills when planning and executing simulation development projects with defined milestones.
CLO #3	Implement quality assurance processes throughout the simulation development lifecycle by identifying testing protocols and feedback mechanisms.
CLO #4	Prepare professional application materials for employment in the simulation industry by creating targeted résumés and portfolios
CLO #5	Evaluate the role of audience and marketing strategies in simulation design through market research and demographic analysis.
CLO #6	Analyze the economics and analytics of the simulation industry by examining monetization models and performance metrics.

Instructional Strategies:

A combination of lecture, demonstration, production simulations, problem solving, practical labs and reflective discussion will be used throughout this course.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Participation	10	
Lab Work	30	May include in-class exercises, assignments, quizzes/tests, and work-in progress
Project	30	
Assignments	30	

Hours by Learning Environment Type

To complete this section:

1. Enter the total course hours.

2. Check all instruction types that could be applicable for this course.

3. Breakdown the total hours into each relevant category where instruction types are selected.

Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 54

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Online

Hours in Category 1: 42

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Hours in Category 2:

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Self-Paced

Hours in Category 3: 12

Course Topics

Course Topics:
Roles and Responsibilities in Simulation Development Teams
The Simulation Development Lifecycle
Time and Project Management for Simulation Development
Quality Assurance in Simulation Development
Professional Development for Careers in Simulation Development
Audience and Market Analysis in Simulation Design
Marketing Strategies and Product Life Cycles
Simulation Analytics and Industry Economics

Course Change Request

New Course Proposal

Date Submitted: 04/04/25 9:02 am

Viewing: VESD 2110 : Integrated 3D Prod Pipeline

Last edit: 04/24/25 10:30 am

Changes proposed by: bgriffiths

Programs referencing this course

236: Virtual Environment and Simulation Design Diploma

Course Name:
Integrated 3D Production Pipeline

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Virtual Environment and Simulation Design (4721)

Contact(s)

Name	E-mail	Phone/Ext.
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Banner Course Name: Integrated 3D Prod Pipeline

Subject Code:

In Workflow

1. 4721 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/07/25 10:36 am Darija Rabadzija (drabadzija): Approved for 4721 Leader
2. 04/07/25 11:00 am Brett Griffiths (bgriffiths): Approved for CTT Dean
3. 05/05/25 2:25 pm Todd Rowlatt (trowlatt): Approved for Curriculum Committee

VESD - Virtual Environment and Simulation Design

Course Number 2110

Year of Study 2nd Year Post-secondary

Credits: 3

Bridge College Code

Bridge Billing Hours

Bridge Course Level

Course Description:

In this course, students work collaboratively to plan and produce a comprehensive project integrating knowledge from across the curriculum. Teams will design and develop interactive entertainment applications using industry-standard tools and technologies. The project-based approach emphasizes the integration of art, design, and technology to deliver a functional application prototype.

Course Pre-Requisites (if applicable):

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes

Details of PLAR:

Methods of assessment may include a challenge exam, submission of a product or portfolio for review, or a practical demonstration. Please contact the Department for details.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Design and plan digital applications by creating comprehensive documentation and asset lists for team-based projects.
CLO #2	Demonstrate team collaboration and project management skills when working on complex production pipelines with multiple contributors.

	Upon successful completion of this course, students will be able to:
CLO #3	Apply industry-standard tools and technologies during the development of interactive digital experiences.
CLO #4	Develop interactive entertainment applications by integrating art, programming, and design elements into cohesive products.
CLO #5	Integrate art, design, and technology by applying cross-disciplinary approaches to creative problem-solving.
CLO #6	Deliver a functional application prototype that meets specified design requirements and technical standards.

Instructional Strategies:

A combination of lecture, demonstration, production simulations, problem solving, practical labs and reflective discussion will be used throughout this course.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Participation	10	
Lab Work	30	May include in-class exercises, assignments, quizzes/tests, and work-in progress
Project	30	
Assignments	30	

Hours by Learning Environment Type

To complete this section:
1. Enter the total course hours.
2. Check all instruction types that could be applicable for this course.
3. Breakdown the total hours into each relevant category where instruction types are selected.
Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 54

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Online

Hours in Category 1: 42

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Hours in Category 2:

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Self-Paced

Hours in Category 3: 12

Course Topics

Course Topics:
Introduction to Project Design and Development
Team Dynamics and Collaboration Strategies
Project Management Tools and Techniques
3D Game Engines and Development Basics
Digital Art and Asset Creation
Audio Design for Applications
User Interface and User Experience Design
Polishing and Publishing Interactive Applications

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Course Change Request

New Course Proposal

Date Submitted: 04/04/25 9:03 am

Viewing: VESD 2115 : Virtual Env & Sim Career Dev 2

Last edit: 05/02/25 4:03 pm

Changes proposed by: bgriffiths

Programs referencing this course

236: Virtual Environment and Simulation Design Diploma

Course Name:
Virtual Environment and Simulation Design Career Development 2

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Virtual Environment and Simulation Design (4721)

Contact(s)

Name	E-mail	Phone/Ext.
Brett Griffiths	bgriffiths@vcc.ca	6048717012
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Banner Course Name: Virtual Env & Sim Career Dev 2

Subject Code:

In Workflow

1. 4721 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/07/25 10:36 am Darija Rabadzija (drabadzija): Approved for 4721 Leader
2. 04/07/25 11:00 am Brett Griffiths (bgriffiths): Approved for CTT Dean
3. 05/05/25 2:25 pm Todd Rowlatt (trowlatt): Approved for Curriculum Committee

VESD - Virtual Environment and Simulation Design

Course Number 2115

Year of Study 2nd Year Post-secondary

Credits: 6

Bridge College Code

Bridge Billing Hours

Bridge Course Level

Course Description:

This intermediate career development course focuses on analyzing employment opportunities and tailoring application approaches to align with students' evolving professional development goals. Students will create and implement specialized learning objectives that connect with specific industry specializations while critically analyzing work experiences to identify professional strengths and areas for growth. The course emphasizes applying effective communication and collaboration skills in professional workplace settings, preparing students for advancement in their chosen simulation/XR career path.

Course Pre-Requisites (if applicable):

VESD 1220.

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes

Details of PLAR:

Methods of assessment may include a challenge exam, submission of a product or portfolio for review, or a practical demonstration. Please contact the Department for details.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Analyze employment opportunities and tailor application approaches to match professional development goals.

	Upon successful completion of this course, students will be able to:
CLO #2	Create and implement personalized learning objectives aligned with industry specializations.
CLO #3	Analyze work experiences to identify professional strengths and areas for growth.
CLO #4	Apply effective communication and collaboration skills in professional workplace settings.

Instructional Strategies:

This course will be delivered online and will include a combination of discussions, assignments, reflections, and live synchronous sessions.

Evaluation and Grading

Grading System: Satisfactory/Unsatisfactory Passing grade: S (61%)

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Participation	20	Facilitation of peer discussions, contribution to industry networking events, and collaborative career development activities
Assignments	30	Targeted application materials for specialized roles and industry specialization research
Portfolio	30	Development of professional portfolio highlighting project work and technical accomplishments
Project	20	Industry connection project including informational interviews and network development activities

Hours by Learning Environment Type

To complete this section:

1. Enter the total course hours.

2. Check all instruction types that could be applicable for this course.

3. Breakdown the total hours into each relevant category where instruction types are selected.

Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 164

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Online

Hours in Category 1: 14

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Hours in Category 2:

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Self-Paced

Hours in Category 3: 150

Course Topics

Course Topics:
Resume
Cover letter
Job search
Work experience
Interview skills
Networking
Communication
Time management
Teamwork

Course Change Request

New Course Proposal

Date Submitted: 04/04/25 9:01 am

Viewing: VESD 2200 : XR Content Production

Last edit: 04/24/25 10:30 am

Changes proposed by: bgriffiths

Programs referencing this course

236: Virtual Environment and Simulation Design Diploma

Course Name:
Extended Reality (XR) Content Production

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Virtual Environment and Simulation Design (4721)

Contact(s)

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Banner Course Name: XR Content Production

Subject Code:

In Workflow

1. 4721 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/07/25 10:36 am Darija Rabadzija (drabadzija): Approved for 4721 Leader
2. 04/07/25 11:01 am Brett Griffiths (bgriffiths): Approved for CTT Dean
3. 05/05/25 2:25 pm Todd Rowlatt (trowlatt): Approved for Curriculum Committee

VESD - Virtual Environment and Simulation Design

Course Number 2200

Year of Study 2nd Year Post-secondary

Credits: 3

Bridge College Code

Bridge Billing Hours

Bridge Course Level

Course Description:

This course introduces students to extended reality (XR) technologies including augmented, virtual, and mixed reality experience and creation tools. Students will analyze the evolution, applications, and industry structure of XR while gaining hands-on experience with hardware and software tools. Through guided projects, students will conceptualize, develop, and present XR content for various applications.

Course Pre-Requisites (if applicable):

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes

Details of PLAR:

Methods of assessment may include a challenge exam, submission of a product or portfolio for review, or a practical demonstration. Please contact the Department for details.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Document the evolution of Extended Reality (XR) by tracing technological advancements from early virtual reality to current applications.
CLO #2	Identify and analyze applications of Extended Reality (XR) across various industries through case studies and market research.

	Upon successful completion of this course, students will be able to:
CLO #3	Explain the structure of the XR industry by examining developer ecosystems, hardware manufacturers, and content distribution channels.
CLO #4	Use XR hardware and software tools to experience and evaluate existing XR applications and development environments.
CLO #5	Plan and conceptualize XR projects by creating storyboards, interaction flowcharts, and technical specifications.
CLO #6	Engage in XR project development and presentation by creating simple XR experiences and demonstrating them to peers.

Instructional Strategies:

A combination of lecture, demonstration, production simulations, problem solving, practical labs and reflective discussion will be used throughout this course.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Participation	10	
Lab Work	30	May include in-class exercises, assignments, quizzes/tests, and work-in progress
Project	30	
Assignments	30	

Hours by Learning Environment Type

To complete this section:

1. Enter the total course hours.

2. Check all instruction types that could be applicable for this course.

3. Breakdown the total hours into each relevant category where instruction types are selected.

Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 54

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Online

Hours in Category 1: 42

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Hours in Category 2:

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Self-Paced

Hours in Category 3: 12

Course Topics

Course Topics:
Introduction to Extended Reality (XR)
Historical Development of XR
Hardware Platforms in XR
Applications of XR Technologies
Roles and Specializations in the XR Industry
Organizational Structures in XR Development
Hands-on XR Tools and Equipment
Planning and Presenting XR Projects

Learning Resources (textbooks, lab/shop manuals, equipment, etc.):

Course Change Request

New Course Proposal

Date Submitted: 04/04/25 9:02 am

Viewing: VESD 2205 : XR Environment Production

Last edit: 04/24/25 10:31 am

Changes proposed by: bgriffiths

Programs referencing this course

236: Virtual Environment and Simulation Design Diploma

Course Name:
Extended Reality (XR) Environment Production

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Virtual Environment and Simulation Design (4721)

Contact(s)

Name	E-mail	Phone/Ext.
Brett Griffiths	bgriffiths@vcc.ca	6048717012
Feras Ghesen	fghesen@vcc.ca	6048717110

Banner Course Name: XR Environment Production

Subject Code:

In Workflow

1. 4721 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/07/25 10:36 am Darija Rabadzija (drabadzija): Approved for 4721 Leader
2. 04/07/25 11:01 am Brett Griffiths (bgriffiths): Approved for CTT Dean
3. 05/05/25 2:25 pm Todd Rowlatt (trowlatt): Approved for Curriculum Committee

VESD - Virtual Environment and Simulation Design

Course Number 2205

Year of Study 2nd Year Post-secondary

Credits: 3

Bridge College Code

Bridge Billing Hours

Bridge Course Level

Course Description:

This course develops students' understanding of extended reality (XR) development environments and their structure, purpose, and importance in creating immersive experiences. Students will learn programming fundamentals, user interface design, and environment creation specific to XR projects. Emphasis will be placed on optimizing and deploying XR assets while analyzing platform-specific requirements and restrictions.

Course Pre-Requisites (if applicable):

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes

Details of PLAR:

Methods of assessment may include a challenge exam, submission of a product or portfolio for review, or a practical demonstration. Please contact the Department for details.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Describe core components of XR development environments by examining engines, libraries, and frameworks used in industry.

	Upon successful completion of this course, students will be able to:
CLO #2	Develop interactive XR environments by implementing spatial design principles and user experience guidelines.
CLO #3	Apply logic and code in XR development when creating interactive elements and behaviour systems.
CLO #4	Integrate multimedia elements into XR environments by importing and configuring 3D models, audio, and visual effects.
CLO #5	Optimize and deploy XR projects for target hardware platforms by implementing performance-enhancing techniques and build processes.
CLO #6	Analyze platform-specific requirements and restrictions when developing cross-platform XR applications.

Instructional Strategies:

A combination of lecture, demonstration, production simulations, problem solving, practical labs and reflective discussion will be used throughout this course.

Evaluation and Grading

Grading System: Letter Grade (A-F) Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Participation	10	
Lab Work	30	May include in-class exercises, assignments, quizzes/tests, and work-in progress
Project	30	
Assignments	30	

Hours by Learning Environment Type

To complete this section:

1. Enter the total course hours.

2. Check all instruction types that could be applicable for this course.

3. Breakdown the total hours into each relevant category where instruction types are selected.

Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 54

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Online

Hours in Category 1: 42

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Hours in Category 2:

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Self-Paced

Hours in Category 3: 12

Course Topics

Course Topics:
Introduction to Extended Reality (XR) Development Environments
Core Components of Development Engines
Prototyping XR Environments
Scripting and Logic Implementation
Multimedia Integration in XR
Platform Deployment and Optimization
Advanced Asset Workflow
Platform-Specific Requirements and Restrictions

Course Change Request

New Course Proposal

Date Submitted: 04/04/25 9:01 am

Viewing: VESD 2210 : Audio Design & Prod Anim & Sim

Last edit: 04/24/25 10:31 am

Changes proposed by: bgriffiths

Programs referencing this course

236: Virtual Environment and Simulation Design Diploma

Course Name:
Audio Design and Production for Animation and Simulation

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Virtual Environment and Simulation Design (4721)

Contact(s)

Name	E-mail	Phone/Ext.
Brett Griffiths	bgriffiths@vcc.ca	6048717012
Feras Ghesen	fghesen@vcc.ca	6048717110

Banner Course Name: Audio Design & Prod Anim & Sim

Subject Code:

In Workflow

1. 4721 Leader
2. CTT Dean
3. Curriculum Committee
4. Education Council
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/07/25 10:36 am Darija Rabadzija (drabadzija): Approved for 4721 Leader
2. 04/07/25 11:01 am Brett Griffiths (bgriffiths): Approved for CTT Dean
3. 05/05/25 2:25 pm Todd Rowlatt (trowlatt): Approved for Curriculum Committee

VESD - Virtual Environment and Simulation Design

Course Number 2210

Year of Study 2nd Year Post-secondary

Credits: 3

Bridge College Code

Bridge Billing Hours

Bridge Course Level

Course Description:

This course covers audio design fundamentals, interactive audio, and 3D audio principles for creating cohesive game sound environments. Students will learn to differentiate between 2D and 3D audio while evaluating audio middleware solutions for game engines. Through practical exercises, students will create and implement simulation audio assets using foley techniques and design interactive, atmospheric audio experiences.

Course Pre-Requisites (if applicable):

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes

Details of PLAR:

Methods of assessment may include a challenge exam, submission of a product or portfolio for review, or a practical demonstration. Please contact the Department for details.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Explain the historical and technical aspects of simulation audio through analysis of industry evolution and current standards.

	Upon successful completion of this course, students will be able to:
CLO #2	Differentiate between 2D and 3D audio in simulation and XR by comparing implementation techniques and perceptual effects.
CLO #3	Evaluate audio middleware solutions for game engines by testing integration methods and performance characteristics.
CLO #4	Create and implement simulation audio assets by recording, editing, and mixing sound elements for interactive environments.
CLO #5	Apply foley and vocal techniques for audio production when developing custom sound effects and character voices.
CLO #6	Design interactive and atmospheric audio for simulations by implementing adaptive sound systems and spatial audio techniques.

Instructional Strategies:

A combination of lecture, demonstration, production simulations, problem solving, practical labs and reflective discussion will be used throughout this course.

Evaluation and Grading

Grading System: Letter Grade (A-F)

Passing grade: C

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Participation	10	
Lab Work	30	May include in-class exercises, assignments, quizzes/tests, and work-in progress
Project	30	
Assignments	30	

Hours by Learning Environment Type

To complete this section:

1. Enter the total course hours.

2. Check all instruction types that could be applicable for this course.

3. Breakdown the total hours into each relevant category where instruction types are selected.

Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 54

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Lecture

Online

Hours in Category 1: 42

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Hours in Category 2:

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Self-Paced

Hours in Category 3: 12

Course Topics

Course Topics:
History and Evolution of Game Audio
Audio Fundamentals and Technical Specifications
2D vs. 3D Audio in Simulation and XR
Adaptive Audio in Simulation Design
Audio Middleware Solutions for Game Engines
Creating Simulation Audio Assets
Foley Techniques and Vocal Audio Production
Interactive Audio Implementation in Simulations

Course Change Request

New Course Proposal

Date Submitted: 04/04/25 9:52 am

Viewing: **VESD 2215 : Virtual Env & Sim Career Dev 3**

Last edit: 05/02/25 4:03 pm

Changes proposed by: bgriffiths

Programs referencing this course

236: Virtual Environment and Simulation Design Diploma

Course Name:
Virtual Environment and Simulation Design Career Development 3

Effective Date: September 2026

School/Centre: Trades, Technology & Design

Department: Virtual Environment and Simulation Design (4721)

Contact(s)

Name	E-mail	Phone/Ext.
Brett Griffiths	bgriffiths@vcc.ca	6048717012
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In Workflow

1. **4721 Leader**
2. **CTT Dean**
3. **Curriculum Committee**
4. **Education Council**
5. Board of Governors
6. Records
7. Banner

Approval Path

1. 04/04/25 9:50 am Darija Rabadzija (drabadzija): Rollback to Initiator
2. 04/07/25 10:36 am Darija Rabadzija (drabadzija): Approved for 4721 Leader
3. 04/07/25 11:01 am Brett Griffiths (bgriffiths): Approved for CTT Dean
4. 05/05/25 2:25 pm Todd Rowlatt (trowlatt): Approved for Curriculum Committee

Banner Course Name:	Virtual Env & Sim Career Dev 3
Subject Code:	VESD - Virtual Environment and Simulation Design
Course Number	2215
Year of Study	2nd Year Post-secondary
Credits:	6

Bridge College Code

Bridge Billing Hours

Bridge Course Level

Course Description:

This advanced career development course guides students in evaluating professional development needs and creating strategic action plans to secure work opportunities aligned with long-term career goals. Students will design sophisticated learning objectives targeting specialized skills required in their chosen simulation/XR specialization while evaluating workplace experiences to develop comprehensive professional development strategies. The course culminates with students demonstrating mastery of appropriate communication approaches when engaging with diverse team members, clients, and professionals across different workplace contexts within the digital media industry.

Course Pre-Requisites (if applicable):

VESD 2115.

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

Yes

Details of PLAR:

Methods of assessment may include a challenge exam, submission of a product or portfolio for review, or a practical demonstration. Please contact the Department for details.

Course Learning Outcomes (CLO):

	Upon successful completion of this course, students will be able to:
CLO #1	Evaluate professional development needs and create an action plan to secure appropriate work opportunities aligned with career goals.
CLO #2	Design learning objectives that target specific skills needed in chosen simulation/XR specializations.
CLO #3	Evaluate work experiences to develop targeted professional development plans.
CLO #4	Apply appropriate communication approaches when engaging with diverse team members, clients, and professionals across different workplace contexts.

Instructional Strategies:

This course will be delivered online and will include a combination of discussions, assignments, reflections, and live synchronous sessions.

Evaluation and Grading

Grading System: Satisfactory/Unsatisfactory Passing grade: S (61%)

Evaluation Plan:

Type	Percentage	Brief description of assessment activity
Participation	15	Leadership in professional development activities, mentoring junior students, and engagement with industry partners
Assignments	25	Strategic career action plan, specialized skill development evidence, and advanced application materials
Portfolio	30	Finalized professional portfolio with targeted materials for chosen specialization and evidence of career readiness
Project	30	Professional branding project including online presence, presentation materials, and interview preparation

Hours by Learning Environment Type

To complete this section:

1. Enter the total course hours.

2. Check all instruction types that could be applicable for this course.

3. Breakdown the total hours into each relevant category where instruction types are selected.

Note: Not all boxes are required. The total hours and at least one category must be filled in to complete this section.

TOTAL COURSE HOURS: 164

Category 1: Lecture, Online, Seminar, Tutorial

Check all that apply:

Online

Hours in Category 1: 14

Category 2: Clinical, Lab, Rehearsal, Shop/Kitchen, Simulation, Studio

Check all that apply:

Hours in Category 2:

Category 3: Practicum, Self Paced, Individual Learning

Check all that apply:

Self-Paced

Hours in Category 3: 150

Course Topics

Course Topics:
Resume
Cover letter
Job search
Work experience
Interview skills
Networking
Communication
Time management
Teamwork

DECISION NOTE

PREPARED FOR: Education Council

DATE: May 13, 2025

ISSUE: Electronics Repair Technology Diploma: removing provisionally approved status

BACKGROUND:
The School of Trades, Technology and Design launched the Electronics Repair Technology Diploma program in January 2021, within a newly established department.

The program was provisionally approved by Education Council in June 2019.

The Provisional Approval of New Programs Committee met six times to receive updates on program status and to provide guidance and support. There were discussions around student progression and collection of student feedback; faculty recruitment and preparation time for instructors; and space and equipment needs.

Due to the COVID-19 pandemic, delivery was adapted to fully online for the first term. The lab was equipped with video cameras to enable students to observe hands-on demonstrations, and toolkits were sent to students, where possible. Additional practice was incorporated in the following term.

A number of smaller curriculum adjustments were made since the initial approval:

- Revised course sequence to provide a better balance of technical and non-technical aspects
- Updates to six courses, including to course descriptions, learning outcomes and topics

The first cohort graduated in December 2022. Further curriculum development in the areas of electric vehicles (EV) and clean energy was planned at the time. For this reason, the provisional approval committee remained in place beyond the usual two-year timeframe.

DISCUSSION:
The new Clean Energy Technology Diploma was approved in 2024, as part of the suite of programs related to the future Centre for Clean Energy and Automotive Innovation. However, this program will be housed in a department separate from Electronics Repair.

The department is exploring opportunities to develop other new programming, but there are no proposals ready to move forward in the short term. No curriculum changes are proposed for the Electronics Repair Technology Diploma.

The proposal is therefore to remove the provisionally approved status of the program and dissolve the Provisional Approval of New Programs Committee.

RECOMMENDATION:
THAT Education Council provide final approval for the Electronics Repair Technology Diploma program, removing the provisionally approved status.

PREPARED BY: Todd Rowlatt, Chair, Curriculum Committee

DATE: May 1, 2025

DECISION NOTE

PREPARED FOR: Education Council

DATE: May 13, 2025

ISSUE: Course Deactivations

BACKGROUND:

The Board of Governors approved discontinuing the Acute Care for Health Care Assistants Short Certificate and the Health Care Assistant Certificate (EAL Cohort) programs effective May 1, 2025. These programs have not been taught in years.

The current proposal is to deactivate related courses:

- ELSK 0701 English Language Skills 1
- ELSK 0702 English Language Skills 2
- ELSK 0703 English Language Skills 3
- HRCA 1103 Lifestyle and Choices
- HRCA 1105 Interpersonal Communications
- HRCA 1120 Introduction to Practice
- HRCA 1122 Personal Care and Assistance 1
- HRCA 1130 Health & Healing 1
- HRCA 1224 Cognitive or Mental Challenges
- HRCA 1227 Clinical 2
- HRCA 1230 Health and Healing 2
- HRCA 1232 Personal Care and Assistance 2
- HRCA 1320 Working in Acute Care
- HRCA 1325 Acute Personal Care & Assistance
- HRCA 1328 Community Practicum
- HRCA 1329 Clinical 3
- HRCA 1331 Acute Care Clinical

RECOMMENDATION:
THAT Education Council recommends the Board of Governors approve deactivating 17 courses that will no longer be taught.

PREPARED BY: Todd Rowlatt, Chair, Curriculum Committee

DATE: May 1, 2025