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Bachelor of Science, Majors, Minors and Transfer

COMPUTING SCIENCE (Optional Co-op)

A Major and a Minor are offered

Note: VIU also offers a Bachelor of Science, Major and Minor in Computing Science (Mandatory Co-op), a Computing Science Diploma and a Bachelor of Arts, Minor in Computing Science

General Description

Computing Science is a rapidly-growing field, generating a great number of employment opportunities. Government agencies are predicting shortages of qualified computing people that will number in the tens of thousands in Canada alone. The Bachelor of Science, Major in Computing Science, is designed to meet the training and educational requirements outlined by CIPS (Canadian Information Processing Society), ACM (Association for Computing Machinery), and IEEE (Institute of Electrical and Electronics Engineers). These requirements reflect the needs of the computing industry, both nationally and internationally.

The program is composed of courses drawn from the systems, theoretical and business application domains. It is designed to train students in applied computing and educate them in the social, ethical and legal implications of computing.

The program has an optional co-operative education component. To be eligible, students must maintain a grade point average of 6.0 ("B") or better in their Computing Science courses.

The Computer Science Major will be of interest to students wishing to enter the Information Technology industry and/or graduate studies. The Minor will primarily be of interest to students wishing to combine an additional field of study with a strong computing background.

Admission Requirements

- General admission requirements apply for admission to first year.
- Admission to third year requires completion of all first and second year courses, with a minimum grade point average of 4.0 ("C+").

Notes on Admission

- Courses in first year have prerequisites. To satisfy all first year course prerequisites, students must complete the following B.C. Secondary School courses: Principles of Math 12 with a min. "B," English 12 with a min. "C", or equivalents.
- Students who satisfy all first-year course prerequisites will be able to complete the full degree program in four years. Students who are lacking any or all of the first year course prerequisites should speak with a VIU Advisor about upgrading courses.

Requirements for a Major

Students must fulfill all Institutional B.Sc. Degree Requirements, including Degree English Requirements and courses listed below:

YEAR 1	Credits
CSCI 160 (Computing Science I)	4
CSCI 161 (Computing Science II)	4
CSCI 162 (Topics in Computing Science)	4
MATH 121 (Calculus I)	3
MATH 122 (Calculus II)	3
MATH 123 (Logic and Foundations)	3
ENGL 115 (College Composition)	3
3 Electives (*c)	9
Total Credits	**33**

YEAR 2	Credits
CSCI 251 (Systems and Networks)	3
CSCI 260 (Data Structures)	3
CSCI 261 (Computer Architecture & Assembly Language)	3
CSCI 265 (Software Engineering)	3
MATH 223 (Discrete and Combinatorial Mathematics)	3
MATH 241 (Linear Algebra)	3
ENGL 225 (Business and Technical Writing)	3
3 Electives (*c)	9
Total Credits	**30**

YEARS 3 and 4	Credits
CSCI 310 (Intro to Graphical User Interfaces)	3
CSCI 311 (Web Programming)	3
CSCI 320 (Foundations of Computer Science)	3
CSCI 330 (Programming Languages)	3
CSCI 355 (Digital Logic and Computer Organization)	3
CSCI 360 (Intro to Operating Systems)	3
CSCI 370 (Database Systems)	3
CSCI 400 (Computers and Society)	3
CSCI 460 (Networks and Communications)	3
3 Computing electives (*a)	9
3 Electives (*b)	9
5 Electives (*c)	15
Total Credits	**60**

Note: Students must have a minimum "C" average on all 300 and 400-level Computing Science courses completed or taken.

(*a) Students must complete at least 6 additional credits of Computing Science courses at the 400 level, and at least 3 additional credits of Computing Science number 300 or above, excluding CSCI 307, 308 and 309.

(*b) Students must complete at least 9 additional credits at the 300 or 400 level, excluding CSCI 307, 308 and 309.

(*c) Amongst all of the electives taken, students must obtain a combination of at least 12 credits from the Faculty of Social Sciences and the Faculty of Management, as approved by the Computing Science Department.

Requirements for a Minor

Students must fulfill all Institutional B.Sc. Degree Requirements, including Degree English Requirements and courses listed below:

YEAR 1	Credits
CSCI 160 (Computing Science I)	4
CSCI 161 (Computing Science II)	4
CSCI 162 (Topics in Computing Science)	4
MATH 121 (Calculus I)	3
MATH 122 (Calculus II)	3
MATH 123 (Logic and Foundations)	3
Total Credits	**21**

YEAR 2	Credits
CSCI 251 (Systems and Networks)	3
CSCI 260 (Data Structures)	3
CSCI 261 (Computer Architecture & Assembly Language)	3
CSCI 265 (Software Engineering)	3
Total Credits	**12**

YEARS 3 & 4	Credits
CSCI 320 (Foundations of Computer Science)	3
CSCI 370 (Database Systems)	3
4 additional upper level CSCI courses	12
Total Credits	**18**

COMPUTING SCIENCE (Mandatory Co-op)

A Major and a Minor are offered

Note: VIU also offers a Bachelor of Science, Major and Minor in Computing Science (Optional Co-op), a Computing Science Diploma and a Bachelor of Arts, Minor in Computing Science

General Description

Computing Science is a rapidly-growing field, generating a great number of employment opportunities. Government agencies are predicting shortages of qualified computing people that will number in the tens of thousands in Canada alone. The Bachelor of Science, Major in Computing Science, is designed to meet the training and educational requirements outlined by CIPS (Canadian Information Processing Society), ACM (Association for Computing Machinery), and IEEE (Institute of Electrical and Electronics Engineers). These requirements reflect the needs of the computing industry, both nationally and internationally.

The program is composed of courses drawn from the systems, theoretical and business application domains. It is designed to train students in applied computing and educate them in the social, ethical and legal implications of computing.

The program has an optional co-operative education component. To be eligible, students must maintain a grade point average of 6.0 ("B") or better in their Computing Science courses.

The Computer Science Major will be of interest to students wishing to enter the Information Technology industry and/or graduate studies. The Minor will primarily be of interest to students wishing to combine an additional field of study with a strong computing background.

Admission Requirements

- General admission requirements apply for admission to first year.
- Admission to third year requires completion of all first and second year courses, with a minimum grade point average of 4.0 ("C+").

Notes on Admission

- Courses in first year have prerequisites. To satisfy all first year course prerequisites, students must complete the following B.C. Secondary School courses: Principles of Math 12 with a min. "B," English 12 with a min. "C", or equivalents.
- Students who satisfy all first-year course prerequisites will be able to complete the full degree program in four years. Students who are lacking any or all of the first year course prerequisites should speak with a VIU Advisor about upgrading courses.

Requirements for a Major

Students must fulfill all Institutional B.Sc. Degree Requirements, including Degree English Requirements and courses listed below:

YEAR 1	Credits
CSCI 160 (Computing Science I)	4
CSCI 161 (Computing Science II)	4
CSCI 162 (Topics in Computing Science)	4
MATH 121 (Calculus I)	3
MATH 122 (Calculus II)	3
MATH 123 (Logic and Foundations)	3
ENGL 115 (College Composition)	3
3 Electives (*c)	9
Total Credits	**33**

YEAR 2	Credits
CSCI 251 (Systems and Networks)	3
CSCI 260 (Data Structures)	3
CSCI 261 (Computer Architecture & Assembly Language)	3
CSCI 265 (Software Engineering)	3
CSCI 307 (Preparation for Co-operative Education Employment)	1
CSCI 370 (Database Systems)	3
MATH 223 (Discrete and Combinatorial Mathematics)	3
MATH 241 (Linear Algebra)	3
ENGL 225 (Business and Technical Writing)	3
2 Electives (*c)	6
Total Credits	31

YEAR 2 -- SUMMER SEMESTER	Credits
CSCI 308 (Co-operative Work Placement I)	9
Total Credits	**9**

YEARS 3	Credits
CSCI 310 (Intro to Graphical User Interfaces)	3
CSCI 311 (Web Programming)	3
CSCI 320 (Foundations of Computer Science)	3
CSCI 330 (Programming Languages)	3
CSCI 355 (Digital Logic and Computer Organization)	3
CSCI 360 (Intro to Operating Systems)	3
4 Electives (*c)	12
Total Credits	**30**

YEAR 3 -- SUMMER SEMESTER	Credits
CSCI 309 (Co-operative Work Placement II)	9
Total Credits	**9**

YEAR 4	Credits
CSCI 400 (Computers and Society)	3
CSCI 460 (Networks and Communications)	3
3 Computing electives (*a)	9
3 Electives (*b)	9
2 Electives (*c)	6
Total Credits	**30**

YEAR 4 -- SUMMER SEMESTER	Credits
CSCI 408 (Co-operative Work Placement III)	9
Total Credits	**9**

Note: Students must have a minimum "C" average on all 300 and 400-level Computing Science courses completed or taken.

(*a) Students must complete at least 6 additional credits of Computing Science courses at the 400 level, and at least 3 additional credits of Computing Science number 300 or above, excluding CSCI 307, 308, 309, 408, and 409.

(*b) Students must complete at least 9 additional credits at the 300 or 400 level, excluding CSCI 307, 308, 309, 408, and 409.

(*c) Amongst all of the electives taken, students must obtain a combination of at least 12 credits from the Faculty of Social Sciences and the Faculty of Management, as approved by the Computing Science Department.

Requirements for a Minor

Students must fulfill all Institutional B.Sc. Degree Requirements, including Degree English Requirements and courses listed below:

YEAR 1	Credits
CSCI 160 (Computing Science I)	4
CSCI 161 (Computing Science II)	4
CSCI 162 (Topics in Computing Science)	4
MATH 121 (Calculus I)	3
MATH 122 (Calculus II)	3
MATH 123 (Logic and Foundations)	3
Total Credits	**21**

YEAR 2	Credits
CSCI 251 (Systems and Networks)	3
CSCI 260 (Data Structures)	3
CSCI 261 (Computer Architecture & Assembly Language)	3
CSCI 265 (Software Engineering)	3
CSCI 307 (Preparation for Co-operative Education Employment)	1
Total Credits	**13**

YEARS 3 & 4	Credits
CSCI 308 (Co-operative Work Placement I)	9
CSCI 309 (Co-operative Work Placement II)	9
CSCI 320 (Foundations of Computer Science)	3
CSCI 370 (Database Systems)	3
CSCI 408 (Co-operative Work Placement III)	9
Total Credits	**33**

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