

BACHELOR OF INFORMATION SCIENCES

General Information

The Bachelor of Information Sciences (BISc) program is by design an interdisciplinary program involving core courses taken primarily from Business Administration, Computer Science, Economics, Mathematics and Statistics. The core subjects are particularly relevant to the collection, treatment, understanding and management of data (information) encountered in other academic disciplines as well as in business, industry, government and other areas. Emphasis is placed on the statistical methods and modern computing techniques of handling these data, the design and application of mathematical models, and the management of information within organizations.

This four-year degree program is offered in cooperation and in conjunction with departments in the Faculty of Science, Applied Science and Engineering, the Faculty of Business and the Faculty of Arts.

For general regulations on admission, please consult the appropriate section of the University calendar. Transfer into the BISc from another UNB degree program is not permitted if the GPA for the most recent assessment period is below 2.0. For transfer from another university, a CGPA equivalent to 2.0 at UNB is required.

UNB Saint John also offers a Bachelor of Arts with a Major in Information and Communication Studies. This interdisciplinary program explores the influences of communication technology, the media industries and information policy on society. Additional detail and program requirements can be found in this section of the Calendar under Bachelor of Arts, Information and Communication Studies.

General Regulations

It is recommended that students read the General University Regulations, Section B of the calendar, and in particular the subsection headed "Grading System and Classification."

Curriculum

The basic curriculum of the degree consists of a specified set of core courses and a set of regulations governing the choice of others. A student's program is chosen in consultation with a faculty advisor. Three specializations are offered. Years 1 and 2 are the same in all specializations. In Years 3 and 4, students must choose to follow the Decision and Systems Science Specialization, the Decision and Business Management Specialization or the Software Development Specialization.

I. Required Courses

Years 1 and 2

BA 1501 , BA 1216 , BA 2504 , CS 1073 , CS 1083 , CS 1303 , CS 2013 , CS 2513 , ECON 1013 , ECON 1023 , ECON 2013 , ECON 2023 , MATH 1003 , MATH 1013 , MATH 2213 , STAT 1793 , STAT 2793 .

Years 3 and 4

Decision and Systems Science Specialization

BA 2303 , CS 2113 , CS 2813 , CS 3323 , CS 3403 , CS 3513 , CS 3983 , CS 4525 , DA 4993 , ECON 3665 , MATH 2903 , MATH 2913 , MATH 3343 , STAT 3083 , STAT 3093 , STAT 4703 .

Decision and Business Management Specialization

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[BA 2123](#) , [BA 2217](#) , [BA 2303](#) , [BA 2858](#) , [BA 3425](#) , [BA 3623](#) , [BA 3672](#) , [CS 3403](#) , [CS 3513](#) , [ECON 3013](#) , [ECON 3023](#) , [ECON 3665](#) , [ECON 4645](#) , [MATH 2903](#) , [MATH 2913](#) .

Software Development Specialization

[BA 2123](#) , [BA 2203](#) , [CS 2813](#) , [CS 3403](#) , [CS 3513](#) , [CS 3323](#) , [CS 3983](#) , [CS 4525](#)

II. Regulations Governing Course Selection

1. At least 6 ch of courses selected from [HUM 2003](#) , [HUM 2121](#) , [HUM 3121](#) , [ICS 1001](#) , [ICS 2001](#) , [ICS 3001](#) , [ICS 3005](#) , any ENGL course, [WLIT 2501](#) , [WLIT 2502](#) , [PHIL 1053](#) and [PHIL 2111](#) .

Decision and Systems Science Specialization

2. At least 3 ch of courses must be chosen from upper-level Computer Science, Mathematics or Statistics courses. These courses are in addition to those listed in I.
3. Three credit hours (3 ch) from either [MATH 3753](#) or [MATH 3903](#) .
4. Three credit hours (3 ch) in upper-level Statistics. These courses are in addition to those listed in I or chosen to fulfill II.2.
5. At least 3 ch selected from disciplines in Arts or Business to be approved by faculty advisor.

Decision and Business Management Specialization

6. At least 12 ch of courses selected from disciplines in Arts, Business or Science, Applied Science and Engineering to be approved by faculty advisor.
7. Four credit hours (4 ch) of courses selected from [CS 3033](#) , [CS 3423](#) , [CS 3783](#) , [CS 3893](#) , [CS 4525](#) and [DA 4403](#) .

Software Development Specialization

8. At least 12ch of courses (minimum 4 courses) selected from [CS 2113](#) , [CS 3113](#) , [CS 3123](#) , [CS 3893](#) , [CS 4103](#) , [CS 4893](#) , [CS 3033](#) , [CS 4033](#) , [DA 4403](#) , [ECON 3665](#) , [MATH 2903](#) , [MATH 2913](#) , [STAT 4243](#) , [MATH 3343](#) , [MATH 3213](#) , or approved electives.
9. At least 30ch of approved electives.
10. Overall a minimum of 32ch of upper-level courses are required.

A grade of C or better is required in all required courses and all courses selected under II.1 - II.10.

An example of what would typically be taken by a student in the first year of the degree program follows:

BA 1501	Introduction to Business	(1st term)
BA 1216	Accounting for Managers I	(2nd term)
MATH 1003	Intro to Calculus I	(1st term)
MATH 1013	Intro to Calculus II	(2nd term)
CS 1073	Introduction to Computer Programming in Java	(1st term)
CS 1083	Computer Science Concepts (Java)	(2nd term)
ECON 1013	Introduction to Microeconomics	(1st term)
ECON 1023	Introduction to Macroeconomics	(2nd term)

Plus specified Arts electives (Regulation II.1) equivalent to 2 term courses.

Certificate in Data Analysis

The Certificate in Data Analysis is offered to afford individuals an opportunity to study the basic skills in mathematics, statistics, computer science and data analysis. The program will be of particular interest to those who wish to gain an insight into the way in which computer programs are developed and how they can be used effectively in the analysis of both scientific and business data.

Subject to the General Regulations listed below, the certificate program is open to all interested individuals. There are no specific academic prerequisites, but only a desire and willingness on the part of each student to engage in learning at a university level.

A certificate will be awarded to a student upon successful completion of the program.

General Regulations

1. Each person entering the program must have the approval of the Department of Computer Science and Applied Statistics or the Department of Mathematical Sciences.
2. A maximum of 12 ch or the equivalent may be transferred from another degree or similar program, whether taken at this university or elsewhere.
3. A certificate will not be awarded to a student enrolled for a degree but students who have withdrawn from an undergraduate degree program may apply for the certificate.
4. Normally a student must have grade 12 mathematics to enter the program. [Math 1863](#) may be taken as one of the optional courses in the certificate program by those students who do not have grade 12 mathematics from high school or feel that they are weak in the subject. It should be noted that [MATH 1863](#) does not count as a credit course in the BSc degree.
5. To earn a certificate a student must successfully complete 34 ch in approved courses specified for the certificate and must achieve a grade point average of at least 2.0. It should be noted that students must obtain a grade of C or better in certain courses if they are to be used as prerequisites for subsequent courses.

Requirements

Students must complete at least 34 ch as follows:

1.

MATH 1003 :	Intro to Calculus I	3 ch
STAT 1793 :	Introduction to Probability & Statistics I	3 ch
CS 1073 :	Intro to Computer Programming in Java	4 ch
2. At least 15 chosen from:

MATH 1013 :	Intro to Calculus II	3 ch
CS 1083 :	Computer Science Concepts (Java)	4 ch
STAT 2793:	Introduction to Probability & Statistics II	3 ch
CS 1303 :	Discrete Structures I	4 ch
CS 2013 :	Software Engineering I	4 ch
CS 2113 :	Scientific Computing	4 ch
CS 2513 :	Intro to Information Systems	4 ch
DA 3203 :	Data Analysis using Statistical Software Pkgs.	4 ch

Other choices may be approved in consultation with the Department of Computer Science

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& Applied Statistics or the Department of Mathematical Sciences.

3. Sufficient additional credits, chosen in consultation with the Department of Computer Science & Applied Statistics or the Department of Mathematical Sciences, to bring the total to 34 ch.

Further information may be obtained by contacting the Department of Computer Science and Applied Statistics or the Department of Mathematical Sciences.