



## CAREER PATHFINDERS

### BACHELOR OF ARTS OR SCIENCE DEGREE WITH A MAJOR IN

# APPLIED COMPUTER SCIENCE

## Overview

The Applied Computer Science major is designed to prepare students in the following core areas: Programming Fundamentals (object-oriented, event driven, algorithms), Information Management (database systems, data modeling, data warehousing, relational databases, query languages), Software Engineering (software requirements and design, software process, software project management), Operating Systems, Net-Centric Computing (internet programming, networks, security), Human Computer Interaction (GUI Design and Programming), and Intelligent Systems (Machine Learning).

*"I left the University of Winnipeg with strong computer programming and database design skills. As the Application Administrator for a large hospital information system I am able to put these skills into practice on a daily basis."*

- Matthew Sodomsky (BSc) Application Administrator, Manitoba e-Health, Winnipeg Regional Health Authority

## Job Titles

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| <ul style="list-style-type: none"><li>• Actuary (NOC 21210)</li><li>• Aerospace Engineer (NOC 21390)</li><li>• Air Traffic Controller (NOC 72601)</li><li>• Computer Aided Design Technician (NOC 22212)</li><li>• Computer Marketing Representative (NOC 10022)</li><li>• Computer Network Specialist (NOC 22220)</li><li>• Computer Programmer (NOC 21232)</li><li>• Consumer Loan/Credit Officer (NOC 63102)</li></ul> | <ul style="list-style-type: none"><li>• Cost Estimator/Analyst (NOC 22302, 22303)</li><li>• Financial Auditor (NOC 11100)</li><li>• Information Scientist (NOC 21231)</li><li>• Investment Manager (NOC 10021)</li><li>• IT Specialist (NOC 21222)</li><li>• Market Research Analyst (NOC 41402)</li><li>• Meteorologist (NOC 21103)</li><li>• Public Health Statistician (NOC 21210)</li><li>• Technical Support Specialist (NOC 22220)</li><li>• Quality Assurance Analyst (NOC 21222)</li><li>• Webmaster (NOC 21234) <sup>1</sup></li></ul> |
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<sup>1</sup> The numbers following each job title refer to [Canada's National Occupational Classification \(NOC\) code](#). Jobs may require additional education or training.

## Work Settings

- Aerospace Industry
- Construction Industry
- Consulting Firms
- Educational Institutions
- Financial Industry
- Government Agencies/Departments
- Health Agencies
- Insurance Companies
- IT Industry
- Manufacturing Industry
- Market Research Firms
- Marketing/Public Relations Agencies
- Media/Publishing/Telecommunications Industries
- Self Employed
- Software/Hardware Developers
- Software/Hardware Manufacturers
- Trade/Professional Associations
- Web-Based Companies

## Skills and Characteristics

- Programming skills
- Research and design skills
- Planning and organizing
- Written and oral communication skills
- Meeting deadlines
- Statistical/data management skills
- Analytical and problem-solving skills
- Critical thinking skills and development of solutions to complex problems

## Professional Associations and Other Links

- Canadian Association of Computer Science <http://cacsaic.org/>
- Canada's Association of I.T. Professionals <http://www.cips.ca/about>
- Computing Research Association <http://cra.org/>
- Government of Canada Job Bank <https://www.jobbank.gc.ca/studentdashboard/11.0701/LOS05>
- International Association of Computer Science and Information Technology <http://www.iacsit.org/>
- The Association for Computer Machinery <http://www.acm.org/>

This document is intended to provide a starting point for your career research. For more information about UWinnipeg's Applied Computer Science program, visit the [Department of Applied Computer Science website](#) and the [Applied Computer Science Fact Sheet](#).

Students are encouraged to [schedule an appointment with an Academic and Career Advisor](#) for assistance with career planning.

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