



## INFORMATION ASSURANCE AND SECURITY CERTIFICATE

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### DURATION

78 Hours of Study Part-Time

### STARTING

Fall Term

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### TUITION

\$1,965 (approximation)

Tuition fees are paid for at time of course registration and vary according to individual course. Please check the PACE website for details.

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### ONLINE LEARNING

This program is delivered in an online format.

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# INFORMATION ASSURANCE & SECURITY CERTIFICATE

Demand for technical security and information assurance professionals has risen dramatically in recent years. This is due to changes to Canada's privacy laws and the need to protect and certify data in light of increased attacks by malicious software. This four-course series is core to understanding information assurance issues and methodology, such as – the definition of information assurance; how data is verified and encrypted; what safeguards should be taken with the protection of data; and what a proper incident response is to an attack or security breach.

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## Getting Started

- **To attend a class:**  
Use the "Register Now" feature on the PACE website to register online for a course through our instant enrolment process or go in-person to the PACE Registration Office.

- **To enroll in a program:**  
Submit a completed Application for Admission Form to the PACE Registration Office.

Courses begin at various times throughout the year. It's never too late to get started. Check our website for the latest offerings and application forms.

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## Career Opportunities

Graduates have established exciting careers in the following areas:

- Network security officer
- Technical security officer
- Network security consultant

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## Outcomes

Upon completion of this program, students should be able to:

- Understand basic security, legislation, threats, policies, procedures and security management issues.
- Understand key concepts of cryptography and encryption and how they relate to network security.
- Understand concepts of counter measures and safeguards; remote access controls, firewalls, intrusion detection systems and virtual private networks.
- Understand strategic, conceptual and pragmatic approaches to incident response.

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## Tuition

\$1,965\* Approximate cost of program

\*Tuition fees are paid for at time of course registration and vary according to individual course. Please check the PACE website for details.

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## Program Planning Tool

Please refer to the PACE website to access the Program Planning Tool. This tool allows you to create an individualized learning plan or to determine how many courses you have left until program completion.

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## Program Duration

Applicants to the program have up to five years to complete the 78 hours of study. This program can typically be completed within the fall term.

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## Instructors

Qualified instructors are selected for their professional experience and work in the industry. PACE instructor profiles can be found on the PACE website

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## Graduation Requirements

**Level 1:** Information Security Management (18 hours) - Students are introduced to the area of network & information security. The course provides the conceptual foundation for more advanced topics covered in later IAS courses. In this course students are exposed to basic concepts such as the context of information security, legislation, threats, policies, procedures, security management issues, and risk management and assessment. The course is designed to be conceptual in nature and provides limited hands on experience in working with many of the concepts presented.

**Level 2:** Cryptography and Encryption (18 hours) - Students are introduced to the area of cryptography and encryption and how it relates to network security. The course will cover the key concepts of encryption and examine how they apply to the network environment and eBusiness in general. The benefits and drawbacks of encryption will also be discussed.

**Level 3:** Safeguards and Countermeasures (18 hours) - Students are introduced to the concepts of counter measures, and safeguards such as remote access controls, firewalls, intrusion detection systems and virtual private networks. The course is designed to be conceptual in nature and provides limited hands on experience in working with many of the concepts presented.

**Level 4:** Incident Response (24 hours) Students are introduced to the methodology surrounding incident response, response escalation, and forensic evidence collection. The course will cover the processes and procedures involved with IR, and provide students with practical hands-on training related to response escalation and forensic evidence gathering.

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**TO APPLY:** [ApplyToPACE@uwinnipeg.ca](mailto:ApplyToPACE@uwinnipeg.ca)

**FOR MORE INFORMATION:** [PACEpt@uwinnipeg.ca](mailto:PACEpt@uwinnipeg.ca)

**MAILING ADDRESS:** University of Winnipeg PACE | 515 Portage Avenue | Winnipeg, MB | R3B 2E9 | Canada

**LOCATION:** Buhler Center | 460 Portage Avenue (at Memorial Boulevard) | Winnipeg, MB