Sheridan College Institute of Technology and Advanced Learning

Bachelor of Applied Information Science (Information Systems Security)

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What are applied degrees?

- Applied degrees are undergraduate bachelor (baccalaureate) degrees with an applied, hands-on focus in a particular field.
- They prepare people to work in a profession or earn a professional designation or standing while also earning a degree.
- Students graduate with a Bachelor of Applied Sciences (BASc) degree, for example, rather than a Bachelor of Arts (B.Sc.) degree.

Sheridan's BAISc (ISS) Program:

- Four years program.
- Computer science curriculum with emphasis on secure database/network security, technical and legal issues.
- 8-month (consecutive) paid work placement.
- Two major information systems security related projects.

The program curriculum includes topics such as:

- o Database security
- o Network security
- o Writing secure programs (OO and structured)
- o Ethics and ethical hacking
- o IS security legislation
- o Computer forensics
- o Cryptography and cryptology
- o Physical security
- o Operations security
- o Communications security

Program Map

Sm	Security	Programming	Math	Networks	Database	CS	EI	Tot
1	IS Loss Prevention Methodologies– 3	OOP I (Introduction) - 6	Finite/discrete Math. – 3	Introduction to Communication Networks – 3		Intro. to UNIX Operating System – 3	3	21
2	IS Security Threats and risk assessment – 3	OOP II (Interm.) – 6	Computer Math. – 3		Structured Data Modeling – 3		6	21
3		OOP III (Advanced) (web program.) – 6	Statistical methods – 3		Database imple-mentations and mngmnt– 3	Structured Computer Organization– 3	3	18
4	IS Forensics and data recovery – 3	Multi-tier programming I - 3 Algorithms and Data-Structures – 6		Internetworking – 3			3	18
5	Information Systems Intrusion Detection and Prevention – 3	Multi-tier programming II - 3 Systems Programming - 3			Database security – 3	Operating Systems Design– 3	3	18
6	Intro. to Cryptology – 3 IS Security Auditing – 3 Data/ Information Security Systems – 3	Secure Software Development – 3		Network and distr. systems security – 3			3	18
7	Information Security – 3 Project – 3 Secure e-comm. tech. – 3		Scientific Computing - 3				6	18
8	Computer. Security – 3 Advanced IS Sec. – 3 Graduation Project – 6				Data security standards – 3		3	18

Overall in 8 terms, streams of courses are represented with the following percentage of curriculum:

Stream of courses	Credits	% core	% overall
Security	45	37.5	30%
Programming	36	30.0	24%
Mathematics	12	10.0	8%
Networks	9	7.5	6%
Database Management	9	7.5	6%
Topics in Computer Science	9	7.5	6%
Electives	30	----	20%
Overall	150	100.0	100%

Eight months internship is between years 3 and 4.

How you as ISS Professionals can get involved?

- The Information Systems Security is ever-changing field that is being constantly updated and extended. So is the program. Program's focus and curriculum content, need to be regularly revisited, updated and adjusted to what is new in industry.

- Program has PAC – Program Advisory Committee, consisting of industry professionals, IS Security managers and representatives of various other interested parties.

- PAC members meet at least twice a year to review the program and bring to the table suggestions, offer software and hardware support and donations, as well as other forms of professional and financial contributions to the success of the ISS program.

You are invited to:

- Participate as PAC members,
- To offer help to the program in terms of:
  - o Presentations, lectures, professional visits and discussions with students,
  - o Software/hardware,
  - o Financial help to talented students in the form of grants,
  - o Help us to find internship paid 8-moth placements in your companies for our third year students.

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