

Job Description

Job Title:	Information Technology Specialist
Department:	Engineering Computing
Reports To:	Director, Engineering Computing
Jobs Reporting:	Co-op students, research assistants, casual employees
Salary Grade:	USG 9 – 13
Effective Date:	October 2021

Primary Purpose

The role of Engineering Computing is to acquire, manage and maintain all general computing resources for the Faculty of Engineering, the largest Engineering school in Canada. Engineering Computing is responsible for the planning, development, and implementation of computing systems and network strategies for the Faculty.

Computing activities within Engineering can be broken down into at least four distinct areas including:

- administrative computing (the administrative computing environment)
- student computing (the student computing environment)
- network computing including connections outside Engineering and
- research computing.

Engineering Computing maintains the network infrastructure in the Faculty of Engineering as well as several University systems in support of (2021 data)

- about 350 faculty, 250 staff, 8,000+ undergraduate and 3,000 graduate students
- 90 servers (unix and windows servers)
- the Chorus network connecting 4,500 devices
- many databases and applications specific to the administration of the Faculty of Engineering

Reporting to Director of Engineering Computing or his designate, Information Technology (IT) Specialists are responsible for supporting and maintaining computer systems, Engineering's network infrastructure and the provision of highest quality computing services, as well as support and training for academic and administrative units in Engineering. These responsibilities include the administrative, student, network and research computing environments and the supporting infrastructure. IT Specialists must work closely with local IT staff in administrative or academic units to achieve EC's goal of providing the Faculty of Engineering with effective and efficient information systems and technology, including support for the ongoing transformation of business processes and systems. The IT Specialists comply with and promote the University's policies related to information systems and technology.

A team-based approach is used and each incumbent is expected to take a role in projects, where their skills are most appropriate. The incumbent is expected to work closely and co-operatively with technical and administrative staff across Engineering towards achieving its goals. The incumbent also works with appropriate System Administrators in Engineering units as well as staff in IST and may be called upon to serve on university wide committees.

IT Specialists are generalists. They consult on both hardware and software issues. Although programming may not be the focus of their work, they are expected to understand enough about programming to

provide support. Maintenance of some activities e.g. user account maintenance, web page design, security, maintenance etc. requires programming skills such as php and perl.

It is also acknowledged that Engineering Computing staff must be conversant in computing related technologies such as tablets, telecommunications equipment, and other devices used for research and increasingly for administrative purposes. IT Specialists are required to keep pace with latest developments and technologies in all areas, but especially with respect to their major role eg. hardware, software, networks, applications support, databases.

Key Accountabilities

General Accountabilities

All IT Specialists are expected to:

- provide generalized computer consulting to all constituents in Engineering (faculty, staff and students);
- provide desktop support and maintenance to all university-owned computers in Engineering, including software installations, updates, security patches, etc.;
- advise on the purchasing of computer hardware and software;
- keep pace with developments in technology and advise on their applicability to broad Engineering computing environment.
- Act as a liaison for a Department/School as assigned by Director of Engineering Computing.

Specific Accountabilities as assigned by Director of Engineering Computing

In addition to the General Accountabilities, each IT Specialist is expected to assume one or more of the major roles outlined below. These roles are fluid and are expected to change throughout the IT Specialist's career. As well, the IT Specialist is expected to have a working knowledge of all the roles and be able to provide backup support in the event of illness, vacation, etc.

- **System Administration of the Student Computing Environment.** This includes: system administration of the Windows servers, installing and packaging software, overseeing a portion of the Active Directory that pertains to students, maintenance of the workstations, maintenance of all networked printers and printer accounting and other duties as they pertain to the student computing environment.
- **System Administration of the Faculty/Staff Computing Environment.** This includes: system administration of the Windows servers, installing and packaging software, overseeing that portion of the Active Directory that pertains to faculty and staff, workstation maintenance, and other duties with respect to the faculty/staff computing environment.
- **System Administration of the Faculty Unix and Windows Servers.** This includes: system administration, installing software, maintaining userids and passwords, web server and email maintenance, and security measures.
- **Network Administration.** This includes: configuring and securing the switches and hubs that comprise the subnets, administering IP address assignments, installing cabling and setting up wireless access points, maintaining network authentication devices.
- **Web Support.** This includes: web server installation, maintenance and security, consulting with respect to form and function, providing training and support to the team of web maintainers.
- **E-mail Support.** This includes: e-mail server installation, maintenance and security, consulting with respect to form and function, providing training and support.
- **Database Support.** This includes all SQL databases designed and maintained to meet the needs of the Faculty.

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- **Classroom Technologies.** This includes multimedia audio/visual systems used to advance education in the classroom.

Other Duties

- As assigned by Director of Engineering Computing

**All employees of the University are expected to follow University and departmental health and safety policy, procedures and work practices at all times. Employees are also responsible for the completion of all health and safety training, as assigned. Employees with staff supervision and/or management responsibilities will ensure that assigned staff abide by the above, and actively identify, assess and correct health and safety hazards, as required.*

Required Qualifications

Education

- Degree in computer science, mathematics, engineering or related discipline together with relevant experience or a combination of education and/or experience deemed to be equivalent.

Experience

- Proven experience in a fast-paced academic setting is preferred. Recognized certification would be considered an asset.

Knowledge/Skills/Abilities

- Specific knowledge appropriate for each job classification
- Interdisciplinary of knowledge and skills is ideal because much of the work involves a combination of hardware, software, databases, etc.
- Teamwork is essential, individuals work as a group to solve problems
- Leadership skills, a candidate will perform as a subject matter expert for one or more areas and help lead decisions for the group in those areas

Nature and Scope

- **Contacts:** The primary clients are the entire faculty of Engineering. Other contacts include peers in IST and other faculties to effect campus-wide changes.
- **Level of Responsibility:** Most Engineering Computing staff take a leadership role in their areas of expertise, helping to guide the department on the best possible path. The individual will be responsible for managing their time and departmental resources efficiently and effectively.
- **Decision-Making Authority:** Staff make recommendations and participate in decision making for our operations, which is done by consensus among the group. Staff must be able to articulate issues and devise solutions which are appropriate, affordable and have the community's best interests.
- **Physical and Sensory Demands:** For most staff, work requires a lot of concentration but is usually performed in a private office. The hardware and server groups move a lot of heavy computing hardware which can be physically demanding. Sometimes staff perform some duties in other people's offices, server rooms and public locations like student labs, which can be noisy and can affect concentration.
- **Working Environment:** Every individual has a private office and also has access to meeting areas and shared spaces for various purposes. Staff meet daily to discuss current issues and solutions.