#### Trent University LogoOPSEU JOB DESCRIPTION

**Job Title:** Senior Instructional Technologist

**Job Number:** C-074 | VIP: 1450

**Band:** OPSEU- 12

**Department:** Information Technology

**Supervisor Title:** Senior Manager, Client Support

**Last Reviewed:**  December 7, 2022

#### **Job Purpose:**

As the most senior member of the Learning Technologies workgroup, the Senior Instructional Technologist is a seasoned technical subject matter expert with significant experience managing the hardware, software, and network technologies related to classroom technology, video conferencing, and video capture and delivery. This position provides assistance and expertise to Instructional Technologists and acts as a lead role in interfacing with stakeholders across the organization.

Reporting to the Senior Manager Client Services, the Senior Instructional Technologist operates with minimal supervision, wide latitude for independent judgement, and is responsible for a wide range of duties. This position also takes a lead role in all aspects of the University’s classroom, meeting room, video conferencing, and video/lecture capture technologies and infrastructure. The incumbent coordinates with other campus groups and external vendors to ensure appropriate and stable solutions are provided. In addition, the incumbent provides technology architecture research and consultation for IT Services in video, computing, network, and application technologies.

As a member of the Learning Technologies workgroup, this position is prime backup to Learning Management System and Room Controls and Training personnel. This position will also be closely linked with the Network Systems group to develop and distribute end user tools.

#### Key Activities:

* Responsible for maintaining a Classroom Evergreen strategy which includes:
	+ The plan, design, budget, procurement, installation, scheduling, configuration, integration, programming, administration, security, integrity, service, support, maintenance, and operational stability of all University classrooms, meeting rooms, computer labs, computing commons, video conferencing, and video/lecture capture technologies and infrastructure, and other spaces;
	+ Working closely with faculty, Registrar’s office, and Facilities Management;
	+ Assisting management with the development of grant and capital budget requests for instructional technology.
* Regularly leads projects of critical importance to the University including capital builds and infrastructure integration for remote, hybrid and physical teaching and learning spaces. These projects require senior level project management skills, often within extremely tight timelines, with substantial consequences of success or failure.
* Work with Facilities Management (FM) to provide technology design for new buildings, renovations of existing spaces, and other large projects. Provide budgetary estimates, technology bill of materials, wiring schematics, drawings, specifications, and other documentation as required to create a functional space with technology useful to the end user. Work with FM to coordinate the installation of the technology, including developing and carrying out RFPs for the projects, awarding the installation work, supervising the successful vendor, and programming and commissioning the equipment.
* Through the use of current open-source scripting tools (e.g. PowerShell, Shell, etc.), develop applications, automate tasks and configurations using code, including:
	+ Integration between enterprise learning applications (e.g. video conferencing and learning management system (LMS) applications) and the student information system (SIS) to facilitate synchronous remote course delivery;
	+ Equipment Rental web-based application;
	+ Commons MacOS computers, including allowing students to securely log in with their Trent credentials.
* Plan, design, configure, integrate, test, administer, secure, and maintain the University's lecture/video capture and management system, including lecture capture in classrooms. Integrate the video capture and management system with the LMS to facilitate seamless inclusion of recorded videos within a course.
* Maintain an awareness of industry best practices, liaise and maintain positive relationships with vendors, access support systems and other third-party providers to stay abreast of technology evolution, software revisions, bug fixes, and to obtain product information.
* Perform the physical installation of cabling and all equipment (control systems, displays, projectors, etc.), and field terminations of all standard audio-visual cables and connectors. Program and configure the equipment using manufacturer tools (e.g. Crestron, Biamp) and standardized programming languages (e.g. C#, HTML5). Optimize the performance of the installed technology.
* Plan, develop, maintain and continuously expand a server-side classroom technology equipment monitoring system where interruptions to service can be monitored, prevented or the impact reduced, and from which level 1 support can perform initial troubleshooting. Monitor and evaluate system usage.
* Maintain the operational stability of classroom technology through monitoring of the technology, regular preventative maintenance, and updating devices to recommended current software releases. Analyze and respond to classroom technology problems in a timely manner, and coordinate the resolution of all classroom technology problems, including fixing problems, swapping out defective devices on short notice, and coordinating directly with vendors for repairs and RMAs. Use logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems. Ensure any technology-related disruptions to class delivery are resolved as quickly as possible.
* Provide guidance, mentorship, training and leadership to other members of the Client Services team and assigns work to other team members under the guidance of the Senior Manager, Client Support.
* Act as prime backup for the Learning Management System and Room Controls and Training personnel. Maintain administrator knowledge of the LMS to provide this backup.
* Work with faculty/staff and level 1 support analysts to provide end-user training, support, and consultation. Develop detailed, step-by-step guides for end-users using instructional technology.
* Provide meeting room and classroom facilities design and installation services to all departments. Provide designs, recommendations, and equipment budget estimates for all aspects of audio-visual technology integrations for other campus departments. Request quotes from vendors and assist departments with purchasing.

#### Education Required:

* Honours University Degree (4 year) in Computer Science, Electrical Engineering, Computer Engineering, or a related field.

#### Experience/Qualifications Required:

* A minimum of five years of directly related, progressively responsible experience in audio/visual design, installation, cabling (including terminations), programming, configuration, and maintenance, operating under deadlines and in a self-directed fashion.
* A minimum of five years of hands-on experience managing video capture and video conferencing equipment and technologies.
* Current AVIXA Certified Technology Specialist (CTS) designation. CTS-D preferred.
* Current control system manufacturer (i.e. Crestron) programming training.
* Demonstrated ability to work independently and as a member of a dynamic team, organize time among multiple tasks and to work on complex problems where analysis requires in-depth evaluation of various factors. Highly self-motivated and able to handle multiple priorities and meet short deadlines.
* Demonstrated project management skills and the ability to work from assigned objectives, relative priorities and critical areas that impinge on work of other units, to plan work around a schedule, and to self-direct activities with minimal direct supervision.
* Advanced analytical and problem-solving skills, including the ability to visualize infrastructure and processes, and translating technology capabilities to meet stated service requirements.
* Extremely high level of attention to detail.
* Demonstrated ability to both apply policy and take direction.
* Proven track record of optimizing technological designs to meet business and economic requirements.
* Excellent organizational skills and an effective communicator both verbally and in writing, with the ability to frame technology issues in business terms and vice versa, and to effectively manage and confront conflicts and issues.
* Highly adaptive and flexible to changing environments and priorities.
* Well-versed in the latest technology offerings, capabilities, and trends.
* Demonstrated skills in, and commitment to, customer service and continuous improvement.
* Demonstrated advanced technical skills, hands-on experience, understanding, and troubleshooting experience in the following core areas:
	1. Video technologies including compression, encryption/decryption, internet streaming, and rendering formats (MPEG, MOV, H.264, RTMP, WebRTC, HLS, etc.).
	2. Video conferencing protocols (H.320, H.323, SIP, etc.), unified communications integration, and video conferencing hardware and software (e.g. Cisco, Polycom).
	3. Networking protocols, wiring, and configuration (firewalls, ports, layers, etc.)
	4. All aspects of computer, multimedia, and audio/visual systems technologies, including design, hardware, and wiring.
	5. Major computing operating systems (i.e. Windows, MacOS, Linux).
	6. Programming and commissioning audio/visual systems (e.g. Crestron, AMX, and/or Extron hardware).
	7. Web development languages (HTML5, PHP, JavaScript, etc.).
	8. Object-oriented programming languages (PowerShell, C#, etc.).
* Ability to complete all aspects of a classroom or meeting room audio visual installation.
* Advanced experience designing all aspects of complete classrooms and meeting room audio visual systems.
* Ability to perform independent research and analysis in information technologies and recommend technical directions and updates to video technology and video conferencing systems.
* Ability to collaborate with others to develop solutions and recommendations.
* Ability to provide accurate technical product support to customers, including system administrators and software developers.
* Ability to train and supervise other technical support personnel, while at the same time engaging them in the overall goal of excellence.
* Ability to develop and maintain positive working relationships both within and across organizational boundaries.
* Valid Ontario Driver’s License – Class G.

#### Supervision:

* No formal supervision of others is required.
* Provide guidance by helping new staff to adapt to the work environment or orienting others to work processes and methods on an ad hoc basis.
* Provide training, guidance and direction, monitoring work for accuracy and completion.
* Contractors, such as audio/visual or electrical vendors, will report to this position during certain projects.

**Job Evaluation Factors:**

##### Analytical Reasoning

* Sustained complex analytical reasoning is applied to all aspects of the key activities.
* Complex analysis of data and finances to maintain instructional technology budget.
* Difficult analysis and problem solving related to complex, multi-faceted technical issues.
* Complex and difficult analytic reasoning related to computer programming languages.
* Complex system coding and development for audio/visual systems.

##### Decision Making

Wide latitude for independent judgement in complex decision making on a daily basis for all aspects of the key activities, such as project scheduling, integration techniques, instructional technology equipment budget requests, selection, purchasing, and inventory management. Position operates with a high level of autonomy and independence to execute responsibilities and projects.

##### Impact

* Instructional technology is an important part of the organization and course delivery, and ensuring the technology is continuously operational and relevant can affect the entire University.
* Errors in decision making will impact an instructor’s ability to deliver their courses, thereby affecting students’ access to and availability of learning.
* Financial impact on budgets, including spending other departments’ budget on presentation technologies that must work for their requirements.

##### Responsibility for the Work of Others

**Indirectly responsible:**

* Training and knowledge transfer to other Client Services staff.
* Mentor others within the department by instructing, directing and monitoring to ensure that they have the necessary tools and knowledge to complete projects and ongoing maintenance in a timely manner. Provide details of new technology and functionality to other IT support positions.
* Monitor work on instructional technology equipment, as well as the video capture/ management and video conferencing systems, to ensure it has been completed correctly.

##### Communication

**Internal:**

* Faculty, staff and students: as consultant, solution provider, and support.
* Potentially any and all Trent staff at all levels from front line administration to executive management.
* Represent the University as subject matter expert in instructional technology discussions.

**External:**

* Vendors and colleagues at other educational institutions for information exchange.
* Represent the University as subject matter expert in instructional technology discussions.
* Many vendors and contractors supplying goods and services to the University.

##### Motor/Sensory Skills

* Keyboarding and precise mouse manipulation for programming and user interface design.
* Driving to move equipment and attend to work at all three campuses.
* Dexterity and coordination for equipment installations, including equilibrium to maintain balance on ladders while manipulating heavy equipment like projectors and speakers.
* Hearing for communication and fine adjustments to audio equipment levels.
* Sight for fine adjustments to visual equipment calibrations.
* Fine motor skills for terminating cables and other installation tasks.

##### Effort

**Mental:**

* Position requires a very high level of mental effort with sustained periods of concentration and focus, as well as problems that may take hours, days, weeks or months to resolve.
* Continual interruptions and competing demands for attention to respond to technology issues and support colleagues.
* Dealing with time pressures and conflicting work priorities affecting various stakeholders.

**Physical:**

* Lifting, carrying, bending, considerable walking, moving, pushing/pulling, climbing ladders, extending/reaching, kneeling while moving heavy furniture, equipment, and boxes in the course of installing and maintaining instructional equipment.
* Requires long periods of sitting and/or standing while working at a workstation on a computer for programming, working with spreadsheets, documentation, etc. Long periods of visual attention looking at screens.

##### Working Conditions

**Psychological Conditions:**

* Continuous and changing deadlines.
* Conflicting deadlines and multiple competing demands for projects and tasks.
* Many interruptions to provide support and problem resolution.
* Guiding the work of others.

**Physical Conditions:**

* Prolonged operation of a keyboard and mouse can result in carpal tunnel syndrome.
* Installations can require multiple days of physical exertion moving and installing equipment.
* Exposure to sharp objects, noise and vibration from utility knives, drills, and saws during installations.
* Due to working in all areas of the three campuses, an awareness of the University’s asbestos locations and other hazardous materials is required to avoid exposure.
* Exposure to protrusions and other obstacles working above the ceiling.
* Working in close proximity to building electrical conduits, wiring, and equipment.
* Long periods of sitting result in joint stiffness and back strain.