



CAAT Job Evaluation System for Non-Bargaining Unit Employees

Ontario Colleges of Applied Arts and Technology

The Job Fact Sheet Questionnaire (JFS) is used to gather information for job evaluation purposes for the Colleges= Administrative Staff, Part-Time Support Staff, Part-Time and Sessional Academic Staff positions. Please read each section carefully before completing.

The Education and Experience sections are to be completed by the College according to the College=s recruitment standards.

Upon completion by an incumbent, the JFS is reviewed and, when necessary, adjusted by the position=s Manager and the Senior Manager responsible for the position. Any changes to the JFS are to be reviewed with the incumbent prior to evaluation. The JFS is then submitted to the appropriate College official for job evaluation purposes.

The JFS is not finalized until it has gone through the job evaluation process and the results have been confirmed by the College. A copy of the finalized JFS will be provided the incumbent for information purposes and as a job description.

1. POSITION IDENTIFICATION

Position Title: Principal Researcher - CAWT
Position Number: A00270
Pay Band: 12
Incumbent:
Location/Campus: Frost Campus
Division/Department: Centre for Advancement of Water and Wastewater Technologies (CAWT)
Immediate Supervisor (title): Director, CAWT
Date of JFS: May 25, 2026
Last Evaluated: June 10, 2026

Type of Position:

- Administrative Part-Time Administrative
- Sessional Academic Part-Time Academic
- Part-Time Support Other

I have read and understood the contents of the Job Fact Sheet (if completed by an incumbent):

Incumbent: _____ Date: _____

Recommended by:
Position's Manager: _____ Date: _____

Approved by:
Senior Manager: _____ Date: _____

2. POSITION SUMMARY

Provide a concise description of the position by identifying its most significant responsibilities and/or accountabilities.

Reporting to the Director, CAWT, the Principal Researcher is responsible for leading and coordinating the development and execution of effective research projects by consulting and engaging with industry partners. The incumbent will provide scientific and technical leadership and manage a range of applied research and related activities, including partner liaison activities, development of technical components of grant and proposal applications for all projects, project coordination, budget tracking, and human resources management as assigned. The incumbent will be responsible for overseeing and implementing both field-based and laboratory research projects; compiling and analyzing results; developing technical specifications, engineering designs, and data collection strategies as required; publishing results of work in scientific journals, writing detailed technical reports, annual reports and other publications. The incumbent is responsible for ensuring projects are designed and implemented in accordance with scientific, engineering, regulatory, and health and safety requirements, including responsibilities associated with Professional Engineering licensure and applicable environmental approvals. The role will identify technical, operational, and regulatory risks associated with research projects and develop mitigation strategies to support successful project execution. The Principal Researcher works closely with the Director, CAWT to implement projects and address variances in budgets, project outcomes, and activities to support successful project delivery.

3. KEY DUTIES

Provide a description of the positions key duties. Estimate the percentage of time spent on each duty (to the nearest 5%). Add an extra page if necessary.

	% of Time
Scientific Leadership	45%
<ul style="list-style-type: none">• Provide scientific and technical direction to researchers and other technical and professional staff on experimental design, methods of data collection and analysis for research studies where required.• Implement both field-based and laboratory research projects; compile and analyze results; develop technical specifications, engineering designs, and data collection strategies as required; prepare project documentation.• Review and interpret technical data and research findings to ensure scientific rigor and alignment with project objectives.• Ensure projects are designed and implemented in accordance with scientific, engineering, regulatory, and health and safety requirements, including responsibilities associated with Professional Engineering licensure and applicable environmental approvals.• Identify technical, operational, and regulatory risks associated with research projects and develop mitigation strategies to support successful project execution.• Publish results of work in scientific journals, newsletters, annual reports, technical reports, and other publications• Present at scientific meetings, workshops, training courses, field tours, seminars and other forums.	
Partner Relations	20%
<ul style="list-style-type: none">• Serve as the primary point of contact for research partners throughout project execution, ensuring clear and consistent communication during the project lifecycle.	

- Schedule and lead meetings with partners to provide progress updates, gather feedback, and discuss emerging project needs or challenges.
- Present preliminary and final research findings to partners in a clear and accessible manner, tailoring communication to their needs and interests.
- Support development of technical components of grant and proposal applications associated with assigned research projects.
- Maintain effective working relationships with industry partners, research collaborators, government agencies, and external organizations associated with applied research activities.
- Participate on technical committees, working groups, conferences, and industry or academic forums to support collaboration, knowledge sharing, and professional networking opportunities relevant to the research area.
- Initiate and participate in collaborative research activities with other academic institutions, industry partners, and external organizations where appropriate.
- Work collaboratively with Fleming College faculty and staff to support development and implementation of applied research projects where appropriate.

Management & Project Guidance

30%

- Coordinate projects to ensure scientific rigor while meeting industry partner goals, regulatory requirements, project timelines, and approved budgets.
- Provides scientific leadership, direction, coaching and day-to-day project guidance to research teams, monitoring work and troubleshooting issues as they arise.
- Supervises and manages the full time, temporary part-time and casual employees (including student workers), who are hired for specific research projects, ensuring the smooth operation and delivery of objectives for these projects.
- Track and monitor research project budgets in coordination with the Research Grants Financial Officer and Director, CAWT.
- Supports opportunities for students and faculty to participate in applied research projects in the research area and ensures compliance with funder expectations and requirements (e.g. NSERC, Fed Dev, OCI, etc.).
- Supports equity, diversity and inclusion principals in research practice and project activities in accordance with institutional and funder requirements.
- Provides technical expertise and input to support development and implementation of collaborative research initiatives where appropriate
- Scopes, tracks and coordinates assigned research projects within the research area.

Other Duties as Assigned

5%

TOTAL:

100%

1. COMPLEXITY - JUDGEMENT (DECISION MAKING)

Complexity refers to the **variety** and relative **difficulty** of **comprehending** and **critically analyzing** the material, information, situations and/or processes upon which decisions are based.

Judgement refers to the **process** of identifying and reviewing the available options involved in decision making and then choosing the most appropriate option. Judgement involves the application of the knowledge and experience expected of an individual performing the position.

Provide up to **three examples** of the most important and difficult decisions that an incumbent is typically required to make.

- i. Conduct research: Conducting research in the field of water, wastewater, stormwater, and environmental technologies entails a multifaceted set of responsibilities and duties. The incumbent is tasked with developing and overseeing research projects, including designing experiments, methodologies and protocols for data collection and analysis. The incumbent must utilize various research methods, including laboratory analysis, water quality testing, environmental monitoring, engineering evaluation, and statistical analysis, to interpret data and draw meaningful conclusions. The incumbent is also responsible for ensuring research projects are designed and implemented in accordance with scientific, engineering, regulatory, and health and safety requirements.
- ii. Technical Components of Research Proposals: Supporting the development of technical components of research proposals requires the incumbent to determine appropriate research methodologies, project scopes, technical approaches, timelines, and resource requirements that align with project objectives and funding program requirements. This requires coordination with research staff, industry partners, and Fleming College personnel to gather technical information and ensure proposals are scientifically and operationally feasible. The incumbent must exercise judgement to ensure proposed work can be completed within available resources, timelines, regulatory requirements, and technical constraints.
- iii. Technical Collaboration and Project Coordination: Coordinating collaborative applied research projects with industry partners, academic institutions, and external organizations requires the incumbent to assess technical feasibility, research objectives, available resources, regulatory considerations, and project risks. The incumbent must determine appropriate technical approaches, coordinate project activities, and adapt methodologies or workplans as project requirements evolve. This process involves ongoing communication and coordination with research staff, external partners, contractors, and institutional personnel to support successful project execution.

3. EXPERIENCE (to be completed by the College)

Experience refers to the amount of **related, progressive** work experience required to obtain the essential techniques, skills and abilities necessary to fulfil the requirements of the job at the **point of hire** into the position. This may or may not match the incumbent's actual amount of experience.

The College is to identify the minimum amount and type of experience appropriate for the position based upon the College's recruitment requirements.

Experience required at the point of hire. Up to and including:

- | | |
|--|---|
| <input type="checkbox"/> 0 - no experience | <input type="checkbox"/> 3 years |
| <input type="checkbox"/> 1 month | <input checked="" type="checkbox"/> 5 years** <i>employment experience. Does not include years of graduate work</i> |
| <input type="checkbox"/> 3 months | <input type="checkbox"/> 7 years |
| <input type="checkbox"/> 6 months | <input type="checkbox"/> 9 years |
| <input type="checkbox"/> 1 year | <input type="checkbox"/> 12 years |
| <input type="checkbox"/> 18 months | <input type="checkbox"/> 15 years |
| <input type="checkbox"/> 2 years | <input type="checkbox"/> 17 years |

Specify and describe any specialized type of work experience necessary to fulfil the requirements of the position.

- Significant experience in the design, organization, implementation and oversight of applied research projects including field-based and laboratory research activities, pilot-scale systems, and environmental infrastructure projects. Demonstrated scientific and technical leadership experience.
- Experience developing technical specifications, engineering designs, data collection strategies, and research methodologies to support applied research projects and experimental systems.
- Experience identifying technical, operational, and regulatory risks associated with research projects and developing mitigation strategies to support successful project execution.
- Knowledge of applicable environmental regulations, engineering standards, health and safety requirements, and environmental approval processes relevant to applied environmental research projects.
- Proficiency in statistical analysis (such as R, Python, or specialized software used in civil and environmental engineering) for analysing data collected from experiments.
- Ability to communicate complex scientific and technical concepts both in writing (for research papers, grants, etc.) and verbally (for presentations at conferences, workshop and seminars, and partner meetings)

4. INITIATIVE - INDEPENDENCE OF ACTION

Initiative - Independence of action refers to the **amount of responsibility** inherent in a position and the **degree of freedom** that an incumbent has to **initiate** or **take action** to complete the requirements of the position. An incumbent is required to foresee activities and decisions to be made, then take the appropriate action(s) to ensure successful outcomes. This factor recognizes the established levels of authority which may restrict the incumbent's ability to initiate or take action, e.g., obtaining direction or approval from a supervisor, reliance on established procedures/methods of operation or professional practices/standards, and/or built-in-controls dictated by computer/management systems.

Briefly describe up to three typical job duties/types of decisions that the incumbent is required to perform using their initiative without first having to obtain direction or approval from a supervisor.

1. Coordinates technical collaboration activities with industry partners, academic institutions, contractors, and external organizations for the purpose of supporting applied research projects. The incumbent independently identifies technical requirements, project constraints, resource needs, and operational considerations required to support successful project implementation and collaboration.
2. Makes decisions regarding research methodologies, technical approaches, data collection strategies, and intended project outcomes based on project objectives, technical requirements, regulatory considerations, and available resources. The incumbent exercises professional judgement to ensure research activities are scientifically rigorous, operationally feasible, and aligned with project requirements.
3. During the course of a research project, independently determines when adjustments to research methodologies, pilot system operations, sampling approaches, or project activities are required based on interim results, operational conditions, equipment performance, or regulatory considerations. The incumbent evaluates available information and implements appropriate modifications to support successful project execution while maintaining scientific integrity.

Briefly describe up to three typical job duties/types of decisions that the incumbent is required to perform which required the direction or approval from a supervisor.

1. Terminating or major disciplining of employees
2. Changing the strategic direction of the research centre
3. Significant budget changes or exceeding approved project budgets

Give specific examples of guidelines, procedures, manuals (formal or informal), computer systems/programs that are used in performing job duties and in making decisions, e.g., Government regulations, professional or trade standards, College policies or procedures, department or program procedures, computerized/manual programs/systems and any other defined methods or procedures.

- Fleming College Strategic Plan
- Fleming College Business Plan
- Fleming College Intellectual Property Policy
- Fleming College Commercialization Policy
- Fleming College Research Data Management Policy

- Fleming College internal Service Level Agreements
- Fleming College's Animal Care Policies
- CFI Policy Guide
- Ontario government/PBS directives, policies and operating procedures
- Guidelines from funding organizations (e.g. NSERC, CFI, Fed Dev, OCI)
- Standards of scientific, engineering and applied science and technology professional practice
- CSA Standards (Canadian Standards Association)
- Ontario Health and Safety Act
- Procedures, manuals and guidelines may not readily exist for work related to experimental and/or study design.
- Environmental Compliance Approvals (ECAs), including Environmental Compliance Approval – Limited Operational Flexibility (ECA-LOF) requirements and associated operating conditions
- Applicable environmental legislation, regulations, and compliance requirements related to water, wastewater, stormwater, and environmental research activities
- Professional Engineers Ontario (PEO) standards of professional practice and applicable engineering guidelines

5. POTENTIAL IMPACT OF DECISIONS

Potential Impact of Decisions recognizes the **potential consequences** that **errors in judgement** made by an incumbent, despite due care, could have on the College. Usually, the higher the level of accountability inherent in a position, the greater the potential consequences there are on the College from errors in judgement.

Give up to three examples of the typical types of errors in judgement that an incumbent could make in performing the requirements of the position. Do not describe errors which could occur as a result of poor performance, or ones that are rare or extreme. Indicate the probable effects of those errors on the College, e.g., loss of reputation of program/College, waste of resources, financial losses, injury, property damage, affects on staff, students, clients or public.

- If the incumbent misinterprets research findings, technical data, or fails to identify key limitations in the data, it could lead to inaccurate conclusions being presented in reports, technical specifications, publications, or funding applications. This could damage the credibility of the research, misinform decision-makers, negatively impact research outcomes, and harm the College's reputation within academic, regulatory, and industry communities.
- Development or implementation of projects that are not technically feasible, operationally achievable, adequately resourced, or compliant with regulatory and project requirements could result in project delays, waste of human and financial resources, loss of confidence from industry partners or funding organizations, and reputational harm to the research centre and College.
- Failure to ensure research projects are designed and implemented in accordance with applicable engineering, regulatory, environmental, health and safety, or Research Data Management requirements could result in non-compliance with institutional, funding agency, or environmental approval requirements. This could lead to project delays, increased project costs, loss of future funding opportunities, reputational harm to the College, or potential impacts to staff, students, research partners, or the environment.

6. CONTACTS AND WORKING RELATIONSHIPS

Contacts and Working Relationships refers to the **types, importance** and **intended outcomes** of the contacts and working relationships required by an incumbent to perform the responsibilities of a position. It also measures the skill level required to be effective in dealing with contacts and being involved in working relationships. This factor does **not** focus on the level of the contact, but on the **nature** of the contact.

Indicate by job title, with whom an incumbent is required to interact to perform the duties and responsibilities of the positions. Describe the nature, purpose and frequency of the interaction, e.g., exchanging information, teaching, conflict resolution, team consultation, counselling.

Contacts	Contacts by Job Title	Nature and Purpose of Contact	Frequency of Contact	
			Occasional	Frequent
Internal to the College, e.g., students, staff, management, colleagues.	Director, CAWT	Problem solving exchanging information, project planning, technical guidance, advice on procedures, resource coordination, conflict resolution		X
	Research Grants Financial Officer	Budget questions, project eligibility questions, resource coordination, exchanging information		X
	Researchers & Technologists	Providing scientific and technical direction, exchanging information, coordinating research activities		X
	Student workers	Providing direction, exchanging information, providing feedback		X
	Fleming College faculty and staff	Collaborating on research project development and implementation where appropriate	X	
				X

External to the College, e.g., business and industry representatives, suppliers, advisory committee members, staff at other colleges, government officials, and general public.	Industry Partners	Establishing and maintaining relationships, exchanging information and ideas, troubleshooting, brainstorming, coordinating project activities		X
	Researchers at other institutions	Establishing and maintaining collaborative relationships, exchanging information and ideas, coordinating collaborative research activities	X	
	Government agencies and regulatory organizations	Exchanging technical and regulatory information, coordinating project activities, ensuring compliance with applicable requirements	X	
	Funders	Exchanging technical information related to assigned research projects and funding requirements	X	
	Suppliers / Contractors / Service Providers	Investigating products, equipment, and technical solutions; coordinating technical requirements and exchanging information	X	
	Professional associations, technical committees, and industry working groups	Participation in committees, conferences, and professional forums to support collaboration and knowledge sharing	X	

Occasional (O) Contacts are made once in a while over a period of time.
Frequent (F) Contacts are made repeatedly and often over a period of time.

7. A) CHARACTER OF SUPERVISION/FUNCTIONAL GUIDANCE

Character of Supervision identifies the **degree and type** of supervisory responsibility in a position or the nature of functional/program supervision, technical direction or advice involved in staff relationships.

Required to coordinate, control and provide general supervision for the entire division including the quality and quantity of work, and overall achievements. Responsible for hiring, motivating, promoting, appraisal, discipline and terminating staff.

(/) Check the applicable box(es) to describe the type of supervisory responsibility required by an incumbent in the position:

- Not responsible for supervising or providing guidance to anyone.
- Provides technical and/or functional guidance to staff and/or students.
- Instructs students and supervises various learning environments.
- Assigns and checks work of others doing similar work.
- Supervises a work group. Assigns work to be done, methods to be used, and is responsible for the work performed by the group.
- Manages the staff and operations of a program area/department.*
- Manages the staff and operations of a division/major department.*
- Manages the staff and operations of several divisions/major departments.*
- Acts as a consultant to College management.
- Other e.g., counselling, coaching. Please specify:

* Includes management responsibilities for hiring, assignment of duties and work to be performed, performance management, and recommending the termination of staff.

Specify staff (by title) or groups who are supervised/given functional guidance by an incumbent:
Research Assistants, Research Technologists

Some part-time employees and students of the research centres for projects that the incumbent is leading including casual and part-time research staff such as technologist, technicians, researchers and student workers.

Full-time Research Technologists of the research centre

7. B) SPAN OF CONTROL

Span of Control is complementary to **Character of Supervision/Functional Guidance**. Span of Control refers to the **total number of staff** for which the position has supervisory responsibility, (i.e., subordinates, plus all staff reporting to these subordinates).

Enter the total number of full time and full time equivalent staff reporting through to the position. Also identify the number of staff for whom the position has indirect responsibility (contract for service), if applicable.

Type of Staff	Number of Staff
Full-Time Staff	2
Non Full Time Staff (FTE) *	1.58
Contract for Service **	
Total:	3.58

*** Full Time Equivalency (FTE) conversions for non-full time staff are as follows:**

Academic Staff

Identify the total average annual teaching hours taught by all non-full time teachers (part-time, partial load and sessional) for which the position is accountable and divide by 648 hours for post-secondary teachers and 760 hours for non-post-secondary teachers.

Support Staff

Identify the total average annual hours worked by part-time support staff for which the position is accountable and divide by 1820 hours.

Administrative Staff

Identify the total average annual hours worked by non-full time administrative staff for which the position is accountable and divide by 1820 hours.

**** Contract for Services**

When considering contracts for services, review the nature of the contractual arrangements to determine the degree of supervisory responsibility the position has for contract employees. This could range from no credit for supervising staff when the contracting company takes full responsibility for all staffing issues to prorated credit for supervising staff when the position is required to handle the initial step(s) when contract staffing issues arise.

8. PHYSICAL AND SENSORY DEMANDS

Physical/Sensory Demands considers the **degree** and **severity** of exertion associated with the position. The factor considers the intensity and severity of the physical effort rather than the strength or energy needed to perform the task. It also considers the sensory attention required by the job as well as the frequency of that effort and the length of time spent on tasks that cause sensory fatigue.

Identify the types of physical and/or sensory demands that are required by an incumbent. Indicate the frequency of the physical demands as well as the frequency and duration of the sensory demands. Use the frequency and duration definitions following the tables to assist with the descriptions.

PHYSICAL DEMANDS

Describe the types of activities and provide examples that demonstrate the physical effort that is required in the position on a regular basis, i.e., sitting, standing, walking, climbing, lifting and/or carrying light, medium or heavy objects, pushing, pulling, working in an awkward position or maintaining one position for a long period of time.

Types of Activities that Demonstrate Physical Effort Required	Frequency (note definitions below)				
	Occasional	Moderate	Considerable	Extended	Continuous
Prolonged sitting at meetings		X			
Driving	X				

SENSORY DEMANDS

Describe the types of activities and provide examples that demonstrate the sensory effort that is required in the position on a concentrated basis, i.e., reading information/data without interruption, inputting data, report writing, operating a computer or calculator, fine electrical or mechanical work, taking minutes of meetings, counselling, tasting, smelling etc.

Types of Activities that Demonstrate Sensory Effort Required	Frequency (note definitions below)					Duration
	Occasional	Moderate	Considerable	Extended	Continuous	Short Intermediate or Long
Listening in meetings			X			
Reading and analyzing information			X			
Labour relations/dispute resolution	X					

FREQUENCY:

Occasional:	Occurs once in a while, sporadically.
Moderate:	Occurs on a regular, ongoing basis for up to a quarter of the work period.
Considerable:	Occurs on a regular, ongoing basis for up to a half of the work period.
Extended:	Occurs on a regular, ongoing basis for up to three-quarters of the work period.
Continuous:	Occurs on a regular, ongoing basis throughout the entire work period except for regulated breaks.

DURATION:

Short:	Up to one hour at a time without the opportunity to change to another task or take a break.
Intermediate:	More than one hour and up to two hours at a time without the opportunity to change to another task or take a break.
Long:	More than two hours at a time without the opportunity to change to another task or take a break.

9. WORKING CONDITIONS

Working Conditions considers the frequency and type of exposure to undesirable, disagreeable environmental conditions or hazards, under which the work is performed.

Describe any unpleasant environmental conditions and work hazards that the incumbent is exposed to during the performance of the job.

Environment

Describe the types of activities and provide examples that demonstrate exposure to unpleasant environmental conditions in the day-to-day activities that are required in the job on a regular basis, e.g., exposure to dirt, chemical substances, grease, extreme temperatures, odours, noise, travel, verbal abuse, body fluid, etc. Indicate the activity as well as the frequency of exposure to undesirable working conditions.

Types of Activities That Involve Job Related Unpleasant Environmental Conditions	Frequency (note definitions below)		
	Occasional	Frequent	Continuous
Exposure to wastewater, environmental samples, sludge, and associated odours during field-based and laboratory research activities	X		
Exposure to outdoor environmental conditions including rain, snow, heat, cold, and uneven terrain during field work and project activities	X		
Exposure to noise, dust, and construction-related conditions during installation, operation, or modification of pilot systems and research infrastructure	X		

Hazards

Describe the types of activities and provide examples that demonstrate the hazards in the day-to-day activities that are required in the job on a regular basis, e.g. chemical substance, electrical shocks, acids, noise, exposure to infectious disease, violence, body fluids, etc. Indicate the activity as well as the frequency of exposure to hazards.

Types of Activities That Involve Job Related Hazards	Frequency (note definitions below)		
	Occasional	Frequent	Continuous
Exposure to wastewater and pathogens	X		

Frequency:

Occasional	Occurs once in a while, sporadically.
Frequent	Occurs regularly throughout the work period.
Continuous	Occurs regularly, on an ongoing basis, throughout most of the work period.