**Department of Human Resources**

**OPSEU Job Description**

**Job Title:** Demonstrator

**Job Number:** SS-036

**NOC:** 4012

**Band:** 9

**Department:** Trent School of the Environment

**Supervisor Title:** Director, Trent School of the Environment

**Last Reviewed:** March 29, 2007

**Job Purpose**

Assist in the delivery of academic services by teaching in laboratories and seminars, preparing teaching materials (e.g., manuals, assignments), supervising Teaching Assistants, evaluating undergraduate student work, and tutoring students individually. Assist in managing the Environmental lab, represent the Trent School of the Environment Program in the timetable and registration process, and provide technical support for analytical and sampling equipment and computer technology.

**Key Activities**

1. In co-operation with other instructors, teaches, instructs, demonstrates, and supervises undergraduate student classes in laboratory, field (aquatic and terrestrial), and computer settings.
2. In co-operation with other instructors, teaches safety awareness and procedures and monitors student safety in laboratory and field classes.
3. Co-ordinates Teaching Assistants, including organizing work schedules, preparing and describing work tasks, monitoring work progress, and troubleshooting problems as they arise.
4. In co-operation with other instructors, organizes, researches, designs, prepares, and teaches educational materials, including lab manuals, exams, and assignments.
5. Evaluates students on the basis of written work, lab reports, tests, essays, exams, and oral presentations. Invigilates tests and exams.
6. Teaches undergraduate students one-on-one, clarifying and troubleshooting course-related material, assignments, and computer-related problems.
7. Teaches faculty, researchers, and graduate students how to use analytical and sampling equipment.
8. Maintains academic records and communication tools (e.g., grades, exams, WebCT).
9. Evaluates how computers can be used in teaching and how to implement this technology in classroom situations. Works with Science computer technician and Information Technology personnel to maintain and improve computer facilities and participates in discussions regarding computer resources for students.
10. Maintains and repairs departmental analytical and sampling equipment.
11. Sets up new and troubleshoots computer technology for use in teaching and research, including fielding problems from faculty, staff, and students.
12. Prepares analytical and sampling equipment and supplies for field- and lab-based classes and for faculty, researchers, and graduate students, and computer hardware and software for computer-based classes.
13. Investigates and purchases laboratory supplies and departmental scientific equipment based on need.
14. Establishes and maintains inventories of departmental equipment, laboratory supplies (including chemicals), and teaching reference material. Maintains a loan system for equipment, supplies, and teaching material, which are loaned out to students, demonstrators, and other instructors as needed.
15. Assists in maintaining the Program’s equipment, supply and laboratory teaching budgets, and special project budgets.
16. Oversees implementation of Health and Safety regulations in laboratory courses with respect to WHMIS, CNSC, and Hazardous Waste.
17. Assesses needs, researches, designs, implements, and maintains the Program web site, with the goal to promote Trent and the Trent School of the Environment Program as a place of study, and support Trent School of the Environment academic courses.
18. Develops academic undergraduate course timetable for Program in cooperation with the Registrar’s Office and Program instructors, and with other Departments.
19. Manages registration of students into Trent School of the Environment courses, including making decisions on eligibility to take courses, maintaining records, and in cooperation with the Director, presenting policy to the Program regarding registration qualifications and procedures for undergraduates in the Program.
20. Liaises with the Registrar’s Office regarding registration of students and participates as science representative on early registration policies and procedures for the university.
21. Assesses needs, researches, designs, implements, and maintains the Program web site, with the goal to promote Trent and the Trent School of the Environment Program and support Trent School of the Environment academically.
22. Advises undergraduate students about curriculum and course choices.
23. Advises transfer, TIP, and new students on timetable scheduling.
24. Participates in any internal or external committees as mutually agreed upon with the Director.
25. Serves on the Trent School of the Environment Program Committee.
26. Prepares reports and proposals for fundraising campaigns, program projects, Academic Innovation Fund, and joint departmental projects.
27. Works with Director in recruitment, through development of promotional materials.
28. Continues education to advance or maintain proficiency in technological and job-related knowledge.

**Education**

Master’s Degree.

**Experience Required**

1. Two years of directly related experience; practical experience with a wide range of Environmental Science, Chemistry and Biology field and analytical equipment; or a reasonable equivalent combination of education and experience.
2. Detailed working knowledge of Environmental Science, Chemistry, and Biology disciplines.
3. Excellent communication (oral and written) skills.
4. Must be able to prioritize competing duties and responsibilities based on the individual's interpretation of urgency and importance.
5. Demonstrated knowledge of how to acquire necessary additional information through research of books, periodicals, internet and external contacts.
6. Good word processing, spreadsheet, statistical and graphical skills, as well as good understanding of the Internet and computer networks required; a willingness to learn course specific software is highly recommended.
7. Working knowledge of relevant safety legislation such as WHMIS, Health and Safety Act, CNSC.
8. Some knowledge of maintenance of live organisms.
9. Ability to work independently and time-manage.

**Responsibility for the Work of Others**

Direct Responsibility

Teaching Assistants

**Communication**

Internal:

* Students: Teach and explain course material and evaluations.
* Demonstrators (within and outside department): Develop course material.
* Registrar’s Office: Develop timetable and register students.
* Technicians: Troubleshoot, repair, and replace equipment.
* Technicians from other departments: Discuss and arrange equipment sharing.
* Staff, Faculty, and other Instructors: Answer queries about course content, Trent policy, and technical issues.
* Faculty: Provide Department administration and service.
* Teaching Assistants: Explain assignments and troubleshoot problem situations.
* Computer Technicians: Troubleshoot and repair hardware and software problems.
* Physical Resources: Identify, clarify, and arrange repairs and new projects.

External:

* Retailers and Manufacturers: Gather information about and order equipment; troubleshoot technical and equipment problems.
* Technical Staff from other Universities: Troubleshoot technical and equipment problems.
* Trent Community: Act as a resource.
* Parents and prospective students: Act as a resource in recruitment efforts.
* Trent School of the Environment-related Community Organizations: Act as a resource.

**Motor/ Sensory Skills**

* Fine motor skills - manipulating equipment and measuring devices, data entry via keyboard and mouse
* Dexterity - precision in manipulating equipment and measuring devices
* Gross Motor Skills - moving analytical and sampling equipment, boats, and motors
* Hearing - responding to student and instructor queries
* Sight - reading reports and student assignments, precision in manipulating equipment and measuring devices
* Touch - precision in manipulating equipment and measuring devices

**Effort**

Mental:

* Sustained concentration - marking assignments, creating new hard copy and electronic educational materials, reading new material, analyzing problems, troubleshooting computer problems, working with equipment

Physical:

* Standing, Walking - teaching and demonstrating laboratory and field classes
* Lifting - moving equipment and rearranging labs and classrooms

**Working Conditions**

Physical:

* Injury - Operation of dangerous analytical and sampling equipment
* Monotony - Data entry, sorting of student assignments
* Injury - Exposure to dangerous materials
* Discomfort - Poor lighting and noise conditions
* Injury - Conducting field laboratories in an unpredictable outdoor environment

Psychological:  
Complaints - From instructors and students about timetable, marks

* Frequent coinciding deadlines - Many major tasks due simultaneously, e.g., timetable, registration, educational materials completion at beginning of academic year
* Multiple competing demands - At any one time, many different active tasks (e.g., between different courses, technical support duties)
* No control over work pace - Deadlines and nature of work results in unavoidable busy periods
* Handling of student appeals - Angry students displeased with grades
* Interruptions - Emergency support and last minute changes interrupt planned activities and schedules