**Department of Human Resources**

**OPSEU Job Description**

**Job Title:** Demonstrator-Technician

**Job Number:** SS-036

**NOC:** 4012

**Band:** 9

**Department:** School of the Environment

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

**Last Reviewed:** October 30, 2018

**Job Purpose**

In co-operation with faculty, and under the general supervision of the Director, assist in the delivery of academic services in the School of the Environment by coordinating course offerings; instructing in laboratories and seminars; preparing teaching materials (e.g., manuals, assignments), supervising and coordinating Teaching Assistants, evaluating undergraduate student work, tutoring undergraduate students. Ensuring that health and safety requirements are being met in laboratories; assist in upkeep of the School of the Environment laboratories, represent the School of the Environment in the timetable and registration process, and provide technical support for the use of analytical and sampling equipment and computer technologies.

**Key Activities**

1. In co-operation with other instructors, teaches, demonstrates, and supervises undergraduate student classes in laboratory, field (aquatic and terrestrial), and computer settings.
2. In co-operation with other instructors, organizes, researches, designs, prepares, and teaches educational materials, including laboratory manuals, exams, and assignments.
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 consultation with the Chair, develops the academic undergraduate course timetable for the School in cooperation with the Registrar’s Office and School instructors, and with other Academic Units.
5. Provides tech support for design of the School website.
6. For specialized courses, provides technical support to faculty for the development of on-line courses for the School of the Environment.
7. Evaluates undergraduate students as required on the basis of written work, laboratory reports, tests, essays, exams, oral presentations, handouts and assignments.
8. Responds to student email correspondence, meets with students as needed for courses providing support.
9. Invigilates tests and exams.
10. Manages the laboratory section of the blackboard website for the School undergraduate courses as designated by the Director. Tasks include managing grades, laboratory assignments and quizzes, announcements, course content, monitoring discussion forum.
11. Evaluates how computers may be used in teaching and how to implement this technology in classroom situations. Works with Information Technology personnel to maintain and improve computer facilities and participates in discussions regarding computer resources for 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. Establishes and maintains inventories of departmental equipment, laboratory supplies, 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. In co-operation with other instructors, teaches health and safety awareness and procedures and monitors student safety in laboratory and field classes.
14. Provides one-on-one instruction of undergraduates who need assistance with course related material, assignments, and computer-related problems.
15. Instructs faculty, researchers, and graduate students how to use analytical and sampling equipment.
16. Works with other staff members to ensure upkeep, repair of departmental analytical and sampling equipment.
17. Sets up new and troubleshoots computer technology for use in teaching and research, including fielding problems from faculty, staff, and students.
18. Investigates and purchases laboratory supplies and departmental scientific equipment based on need.
19. Assists in maintaining the School’s equipment, supply and laboratory teaching budgets, and special project budgets.
20. Oversees implementation of Health and Safety regulations in designated laboratory courses with respect to WHMIS, CNSC, and Hazardous Waste. Ensures that appropriate practice in Transportation of Dangerous Goods is followed in shipping and receiving. Ensures that all chemicals used in assigned courses are regulated and appropriately stored and disposed.
21. Assists in allocation of students into School of the Environment laboratory sections, maintaining records, and in cooperation with the Director of the School, presenting policy to the School regarding registration qualifications and procedures for undergraduates in their respective program of study.
22. Liaises with the Registrar’s Office regarding registration of students and participates as science representative on early registration policies and procedures for the university.
23. Advises undergraduate students about curriculum and course choices.
24. Advises transfer, TIP, and new students on timetable scheduling.
25. Participates in internal and/or external committees as mutually agreed upon with the Director of the School.
26. Prepares reports and proposals for fundraising campaigns, School projects, Academic Innovation Fund, and joint departmental projects.
27. Continues education to advance or maintain proficiency in technological and job-related knowledge.

**Education**

Masters of Science Degree.

**Experience Required**

1. Three years of directly related experience; practical experience with a wide range of Environmental Science, Chemistry and Biology field and analytical equipment
2. Detailed working knowledge of Environmental Science, Geography, 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 required.
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

Graduate Teaching Assistants and undergraduate academic 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.
* 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 laboratories 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