**University of Maine**

**Job Description**

**TITLE:** CORE Microscopy Laboratory Manager

**DEPARTMENT:** Coordinated Operating Research Entities (CORE)

**DATE:** January 2020

**REPORTS TO:** Director of CORE or the supervisor designated by the Vice President for Research and Dean of the Graduate School

**Purpose:** To manage the CORE Electron Microscopy Laboratory, and to expand upon the available equipment and services to include new optical and imaging instruments by working with other microscopy groups on campus, and through strategic acquisition of new instrumentation. The CORE Microscopy Laboratory Manager will operate and maintain instruments, and provide expertise and training for its clientele in techniques of microscopy.

**Essential Duties & Responsibilities:**

* Operate the following instruments for the regular maintenance and research needs of the Laboratory and as a service for Laboratory clientele, on a daily basis: TEMs (Transmission Electron Microscopes), SEMs (Scanning Electron Microscopes), EDS (Energy-Dispersive Spectrometer), confocal microscope, light microscopes including compound, dissecting and fluorescence, critical-point dryer, Glass Knife maker, vacuum evaporator, sputter coaters, Conventional Microtomes, Ultramicrotomes, digital cameras and printers, photographic equipment, and any other instruments associated with the CORE Microscopy Laboratory.
* Work with other microscopy groups on campus to build upon and grow CORE equipment and services.
* Provide consulting services to Laboratory clientele for research in microscopy, assist clientele in planning and execution of research in microscopy (devise protocols and procedures for research) and in interpreting results.
* Prepare specimens for microscopy for Laboratory clientele as the need arises: prepare biological tissue for TEM, SEM, confocal microscopy, and EDS analysis (fixation, embedment, sectioning, use of glass and diamond knives, positive and negative staining, CPD, cryofracture, sputter and evaporative coating). Prepare non-biological physical materials for TEM, SEM, confocal microscopy, and EDS analysis (embedding, sectioning, positive and negative staining, CPD, cryofracture, sputter and evaporative coating).
* Perform image-processing services for Laboratory clientele, as needed by preparing digital images, including digital scanning, micrograph recording, and printing, and photography (including electron micrographs, light micrographs, line drawings, projection slides, slide duplication).
* Instruct clientele of the Electron Microscopy Laboratory in use of microscopes, ancillary equipment, and specialized techniques as needed.
* Use iLabs, where possible, to coordinate scheduling of equipment and use of Laboratory facilities by clientele including management of written logs for equipment usage for maintenance and billing, management of written logs of technician time and activities for billing, and to coordinate billing for services with the Senior Financial Manager of CORE.
* Manage and maintain inventory of supplies in the Laboratory.
* Perform routine maintenance and repair of equipment as needed.
* Manage safety-and-health operations of the Laboratory such as maintain chemical inventory of the Laboratory according to guidelines of the University's Safety and Environmental Management, maintain the Laboratory's Hazardous-Materials Satellite Accumulation Area, ensure that proper procedures for electrical and mechanical safety are adhered to in the Laboratory, instruct clientele in approved safety procedures, monitor safety practices in the Laboratory, and generally ensure that the Laboratory remains in compliance with current University, State, and Federal safety regulations.
* Demonstrate facilities to visitors with tours and demonstrations, as requested.
* Develop file of current techniques for use of Laboratory clientele.

**Knowledge & Skill Qualifications:**

**Required:**

* Master's degree involving research in electron microscopy, or a demonstrated competency in electron microscopy in a research and teaching environment.
* Outstanding organizational skills and demonstrated capability to manage multiple projects and deadlines simultaneously.
* Demonstrated skill in operating scanning and transmission electron microscopes, confocal microscopes, and light microscopes.
* Demonstrated skill in preparing biological tissues for all types of microscopy.
* Demonstrated skill in preparing materials and science specimens for all types of microscopy.
* Fine-motor skills for working with small, delicate specimens.
* Mechanical skills for working with precision machinery.
* Ability to undertake routine maintenance and repairs independently or under the instruction of instrument service engineers.
* Knowledge of safety procedures for handling hazardous chemicals, X-ray-generating equipment, vacuum equipment, and electrical equipment.
* Excellent written and oral communication including the skill to effectively convey financial information and explain processes to non-specialists.
* Strong interpersonal skills and the ability to work with individuals from diverse backgrounds.

**Preferred:**

* Several years of related experience managing a microscopy laboratory.
* Experience with using iLabs software to coordinate requests for services and billing for services.

**Supervisory Responsibility:** Supervises student employees.

**Work Environment:** Work involves use of hazardous chemicals, which are required for much of the processing of specimens for electron microscopy; high-vacuum equipment; and X-ray producing instruments.

**Work Year:** Full-time, fiscal-year.

**Work Schedule:** Normal University of Maine business hours are Monday through Friday 8:00 a.m. to 4:30 p.m. Due to the nature of the position, work beyond regular hours (to include evenings and weekends) may be necessary to meet the requirements of the position.

**Position Type:** On-going, full-time, base budgeted.

**Schedule for Evaluation:** In the initial six months of employment and annually thereafter, in accordance with the UMPSA agreement.

**Job Family/Salary Grade:** Job Family 07 / Salary Band 05.

All UMS employees are required to comply with applicable policies and procedures, as well as to complete applicable workplace related screenings, and required employee trainings, such as Information Security, Safety Training, Workplace Violence and Sexual Harassment.

Appropriate background checks will be required.