

Job Description

Job Title:	Technologist - Architectural Engineering
Department:	Civil & Environmental Engineering
Reports To:	Technical Resources Manager
Jobs Reporting:	None
Salary Grade:	USG 8
Effective Date:	December 2017

Primary Purpose

The Technologist - Architectural Engineering will be responsible for supporting teaching and research related activities associated with the Architectural Engineering and Civil Engineering Programs. They will serve as an expert in Building Information Modeling (BIM) software, the production of architectural models and displays, and the operation and maintenance of laboratory and maker space equipment including 3D printers, laser cutters and hand and power tools typical of a woodworking shop..

Key Accountabilities

List the major responsibilities of the job, divided into 3 to 5 broad categories. These should reflect 80 - 90% of "what" the job does not the "how". Insert a category heading and in bullet form below, state specific responsibilities.

Architectural Engineering Lab Instruction and Maintenance

- Under the direction of the Technical Resources Manager and Architectural Engineering Director, set up, maintain and operate a safe, efficient and well organized Architectural Engineering Maker's Space that can be used by undergraduate and graduate students and researchers.
- Provide laboratory instruction to Architectural Engineering students and researchers the and assist with laboratory instruction of Civil and Environmental Engineering students
- Instruct students on the proper and safe use of equipment, including but not limited to 3D printers, laser cutters, hand and power tools typical of a woodworking shop
- Maintain equipment within the Architectural Engineering Maker space
- Fabricate and assemble research and test apparatus and architectural models as requested by researchers, faculty members and department administration
- Provide laboratory instructions and demonstrations to external visitors (for example: Alumni Day, Explorations and Open House activities, industrial visitors and/or consultants)

Assisting with Research Activities

- Supervise, instruct and assist undergraduate and graduate students carrying out architectural engineering research in the laboratory and field.
- Assist the Structures, Materials, Fatigue and Concrete lab technicians with various tasks as requested, on work based either in these laboratories or in the field
- Maintain an up-to-date knowledge of laboratory equipment and testing procedures related to architectural engineering and provide advice as requested by faculty, students or departmental administration
- Assist in sourcing and ordering specialized equipment
- Review product bulletins and contact vendors for detailed information
- Review technical publications

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Health, Safety & the Environment

- Responsible for the safe operation of laboratory and field work
- Complete monthly safety inspections of workplace
- Maintain safety equipment in the laboratory
- Coordinate with the Department Health and Safety Manager in developing Job Hazard Analyses and Standard Operating Procedures for various tasks
- Suggest and implement sustainable solutions
- Ensure that students, Staff and Faculty are wearing the appropriate Personal Protective Equipment when exposed to hazards
- Proactively identify and correct hazardous conditions in the laboratory and field, if unable to correct, notify supervisor

Other Duties

- As requested, participate on departmental, faculty and university committees
- Complete other duties as assigned

Required Qualifications

If hiring today, what would be the required education, experience, knowledge, skills and abilities?

Education

- 3 year Diploma in related field (Architectural Technology, Civil Engineering Technology, Mechanical Engineering Technology), or B.Sc in Building Science, or equivalent combination of education and experience

Experience

- Several years' work experience in a related industrial or academic setting

Knowledge/Skills/Abilities

- Thorough understanding of BIM software
- Ability to maintain, troubleshoot and operate 3D printers, laser cutters, hand and power tools typical of a woodshop
- Excellent communication skills (oral and written)
- Excellent Problem Solving skills
- Solid interpersonal skills and team orientation
- Ability to manage multiple, competing priorities
- Ability to maintain attention to detail in a fast paced, multitasking environment
- Flexible in assisting with new tasks as assigned

Nature and Scope

- **Contacts:** Internal – students (instructing, advising and sharing information), staff and faculty (advising and working with), within the department; External – equipment and material suppliers, equipment repair technicians
- **Level of Responsibility:** Responsible for health and safety oversight within lab and on field sites, influencing departmental management with respect to decision making regarding the purchase of equipment, improving health and safety procedures and improving architectural engineering lab management. responsible for supervising graduate and undergraduate students in lab
- **Decision-Making Authority:** ; In conjunction with the departmental H&S coordinator responsible for making decisions that relate to the health and safety of persons using the architectural engineering lab, responsible for the day-to-day prioritization of student projects with the architectural engineering labs

Job Description



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- **Physical and Sensory Demands:** Distractions, attention to detail, operating hand and power tools, operating forklifts or cranes, lifting, carrying
 - **Working Environment:** The job involves working in both indoor and outdoor environments. The indoor work will occur in an office and laboratory setting and involves reading, writing, working at computer workstations, handling chemicals, working around wood and concrete dust, paints, varnishes and glues, maintaining a clean working area and operating advanced testing equipment. There is a frequent need to give close attention to various stimuli such as preparing architectural models, reviewing written material, online material and discussing information with clients (students, faculty and company representatives) and co-workers. Some tasks may be physically challenging requiring reasonable strength and endurance; use of hand and power tools; working at heights, operating forklifts and cranes and lifting of heavy materials and equipment when assisting the structures, materials, fatigue and concrete lab technicians. There are deadline pressures and competing priorities while at the same time there is a demand for thoroughness, accuracy and safety. The outdoor work involves exposure to outdoor elements year round. The workplace environment may sometimes be off-site at a remote research location where standards and practices may be undefined. The technologist must use best judgement in establishing safe, responsible working practices for all of the participants at external workplace environments. There is some occasional use of a personal or department vehicle. Regular working hours, some evening/weekend work required.