

## Job Description



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<b>Job Title:</b>	Fabrication Lab Manager
<b>Department:</b>	School of Architecture
<b>Reports To:</b>	Administrative Officer
<b>Jobs Reporting:</b>	Fabrication Specialist/Instructor
<b>Salary Grade:</b>	USG 9
<b>Effective Date:</b>	April 2021

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### **Primary Purpose**

The Fabrication Lab Manager (FLM) is responsible for the effective operation and management of the School of Architecture's fabrication resources and facilities. Collectively referred to as the Design and Fabrication Labs (DFL), these resources consist of the alab (analog fabrication lab), dlab (digital fabrication lab), mlab (student maker lab) and design+build studio. Responsibilities include management of the Department's health and safety program, leadership and management of the Department's fabrication staff, laboratories, renovations and equipment purchases. As the Department Health and Safety Coordinator, the FLM will establish and maintain a culture of safety in all areas of the School and the DFL. This position is to work independently and with the AO and Director to plan and implement measures that improve student satisfaction. The FLM should have a sense of ownership for the DFL, and be willing to adapt personal and work schedules to match the deliverables and responsibilities of the position.

### **Key Accountabilities**

#### **Technical Leadership**

- Responsible for strategic planning around technical needs, including the identification of opportunities for improvement
- Serve as senior technical resource/advisor to faculty, technical staff and students
- Ensure the effective, efficient and safe operation of the departments fabrication facilities, resources and equipment
- Collaborate with other technical staff and faculty in ensuring that labs have sufficient supervision and instructional resources.
- Provide technical guidance for the purchase of new lab equipment and software, and make recommendations for replacement of DFL equipment
- Responsible for strategic planning around technical needs, including the identification of opportunities for improvement
- Serve as senior technical resource/advisor to faculty, technical staff and students
- Be involved in the planning of renovation projects and the acquisition of new research equipment
- Serve as technical resource to the Department House and Computing and Technology committees
- Coordinate building alterations and technical services with Plant Operations
- Responsible for the Fabrication Department's equipment inventory
- Serve as technical resource in Department meetings
- Responsible for the human resource management of the technical staff, including recruitment, performance management and evaluation, succession planning, and professional development
- Serve as liaison among technical staff and between technical staff and faculty members (e.g., client service, prioritization of work)

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- Co-ordinate and liaise with Department technical staff on laboratory activities on a regular basis
- Responsible for the regular review of the technical staff structure to ensure that human resources are efficiently and effectively managed
- Maintain an open, supportive and collegial environment
- Assist and instruct undergraduate and graduate students in the use of specialized equipment for research and course instruction
- Supervise undergraduate and graduate projects
- Provide high-level technical advice on the purchase, design and utilization of apparatus and equipment for research and teaching purposes
- Assist in developing, facilitating and scheduling DFL access and use
- Assist in the design, assembly and operation of departmental equipment
- Coordinate the appointment, training and certification of a group of student techs (8-15) each term to assist and support student activities in the various fabrication labs
- Remain current on issues, trends, technologies, demands and approaches in fabrication to advise and determine means to implement initiatives across the Department
- Collaborate with faculty course instructors for development and continuous improvement of labs, activities, demonstrations, workshops, and projects
- Review, recommend, and make changes in materials, techniques, content, resources, or procedures to optimize the value of the laboratory or activity and to keep laboratories and activities current
- Supervise co-op students
- Other duties as assigned by the AO/Director

### **Budgeting and Financial Management**

- Manage budgetary requirements pertaining to the fabrication facilities operation
- Oversee activities of the DFL including financial transactions, work orders, purchase orders, time keeping, etc.
- Ensures the end of month and the end of year reports are sent to Administrative Officer for review
- Year-end submissions include financial statements showing expenses and revenues, DFL activity, and future plans
- Generates budget proposals, capital and non-capital expenditure proposals for the Administrative Officer and Director's review
- Evaluates, recommends and prepares for the purchase of equipment, tools and instruments as required

### **Teaching and Instruction**

- Provide a high level of support for design, fabrication, testing and exploration of various specialized teaching and research projects to the DFL clientele
- Provides instruction, advice and mentoring to students enriching their practical experience in the design process
- Educates and trains students in the proper use of manual fabrication equipment
- Educates and trains students in the proper use of the digital fabrication equipment
- Instructs and assists the technical staff with technical matters
- Coordinates and delivers lectures and tutorials specific to the equipment and processes in both the digital and analog labs
- Provides support to faculty teaching related courses when they require demonstrations, equipment etc.
- Provide a high level of support and deliver state of the art digital fabrication services. The Manager is expected to have a working knowledge of all the equipment and processes within the analog, digital, maker and design+build labs

### **Health and Safety**

- Responsible for the day-to-day and overall management of the School's health and safety program

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- Ensure that safety standards are met in all aspects of building, space and activities at the School and that any equipment safety certifications are maintained for departmental equipment
- Address health and safety concerns by taking action or making recommendations to management
- Serve as health and safety resource to faculty, staff and students
- Chair the Department's health and safety committee
- Represent Architecture on Faculty and University-level committees
- Liaise with UW Safety Office

*\*All employees of the University are expected to follow University and departmental health and safety policy, procedures and work practices at all times. Employees are also responsible for the completion of all health and safety training, as assigned. Employees with staff supervision and/or management responsibilities will ensure that assigned staff abide by the above, and actively identify, assess and correct health and safety hazards, as required.*

### **Required Qualifications**

#### **Education**

- Post-secondary degree/diploma in design, art or architecture preferred with significant experience in the field of design, fabrication and/or manufacturing. Ongoing professional development is required to maintain competency

#### **Experience**

- Ideally 10 years of related experience
- Strategic planning and project management experience
- Managerial experience
- Experience managing an occupational health & safety program
- A minimum of 5 years of experience in the operation of equipment typical to a Machine Shop or Woodworking Shop, including CNC mills/routers, 3d printers, laser cutters and robotics
- Proven experience supervising technical staff (machinists, fabricators and other technical positions) for at least 3 years

#### **Knowledge/Skills/Abilities**

- Exercise independent judgement in areas of time management, task prioritization and decision making
- Good problem solving, communication, and lateral thinking skills
- Ability to foster constructive relationships
- Exceptional verbal and written communication skills
- Woodworking tools, equipment and Methodologies
- Metal working tools, equipment and Methodologies
- Plastic tools, equipment and Methodologies
- Casting and molding tools, equipment and Methodologies
- Experience operating laser cutters, 3d printers, CNC routers and robotics
- Experience maintaining and servicing digital fabrication equipment and digital imaging technology
- Experience developing and implementing training programs suitable for new and advanced users
- Supervisory experience
- Experience creating and maintaining budgets
- Teaching and mentoring skills applicable to students in a fabrication shop/maker space environment
- Basic skills in Microsoft Office suite
- Other skills include: Adobe Creative Suites: Indesign & Photoshop, Rhino & RhinoCam, AutoCad, CNC & Robotic controllers
- Ability to work independently and as part of a team

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- Demonstrated ability to build consensus and work in volatile and demanding circumstances
- Safety standards and procedures

### Nature and Scope

- **Contacts:** Faculty members (from Architecture, Engineering and other Faculties) Undergraduate students Graduate students Manager ACM Administrative Officer Director Departmental Technicians.
- **Level of Responsibility:** Manages all fabrication lab functions and processes. The job has one direct report, but also maintains a team of volunteer and student tech and occasional casual labour that will report as well as. Responsible for the health and safety of faculty, staff and students in a lab/shop environment. The Manager must be able to take initiative with little or no supervisory input. Should always exhibit a high degree of professionalism as a university representative.
- **Decision-Making Authority:** While the Fabrication Lab Manager reports to the AO, most of his/her work will be self-directed in response to the needs of the Fabrication Department and the DFL as a resource for its clientele. The position is responsible and accountable for the operation, supervision and support of the Design Fabrication Labs. The FLM has signing authority for DFL supply purchases and equipment purchases. Responsible to identify health and safety risks within the department and ensure that the risks are mitigated.
- **Physical and Sensory Demands:** Physical demands are typical of a manufacturing environment; standing for long periods of time, exposure to machine noise, heavy lifting, and potential for injury. Sensory demands of dealing with large numbers of students can be a distraction and a source of fatigue and strain. Based on the demands, the job requires exertion of physical or sensory effort resulting in moderate fatigue, moderate strain or risk of injury. Time may be spent working in the various labs or field sites (on and off campus). There are deadline pressures and competing priorities while at the same time there is a demand for thoroughness, accuracy and safety. Regular working hours with occasional evening/weekend work required.
- **Working Environment:** The job may involve working in both indoor and outdoor environments. Indoor working conditions may be similar to a typical wood, metal or fabrication shop with the majority of time spent supervising and assisting students. The DFL is characterized by a hybrid use of both digital and analog resources and the incumbent must be able to switch spontaneously and effectively from one mode of service to the other at any given point in the day. Outdoor work involves exposure to outdoor elements year-round and the workplace environment may be off-site at remote locations where standards and practices may be undefined. The job will require flexibility in the working schedule in order to best serve the Architecture student population. Regular working hours are Monday – Friday 8:30am-5:00pm. Some extended evening and weekend work will be required to accommodate academic deadline periods and installation dates for exhibitions and shows. The role of the DFL is continuously evolving and changing to keep pace with rapidly changing technology and institution demands. To remain relevant, the nature and scope of this position must evolve in step. The FI is expected to be flexible and responsive to the realities of the school's objectives and requirements.