TITLE: Engineer II – Robotics Programmer

DEPARTMENT: Advanced Structures and Composites Center

DATE: 12/21/15

REPORTS TO: Engineer V

Purpose: The purpose of this position is to manage and execute engineering research and development project assignments

Essential Duties & Responsibilities:
Scope:
- Plans, manages, executes, and reports on analysis, design and testing aspects in area of expertise of a variety of R&D projects
- Operates and maintains sophisticated scientific testing equipment to conduct research
- Reviews processing methods and materials and develops and recommends improvements
- Develops and writes work instructions and executes changes in drafts as required
- Participates in providing weekly, quarterly and monthly progress reports to the program manager as well as to clients and sponsors
- Writes industrial contract proposals and assists in writing proposals for grants and other contracts
- Participates in writing patent applications
- Assists in writing technical reports and papers detailing research and development activities for journals, periodicals, clients, and sponsors
- Develops and maintains updated Gantt charts for projects

Impact:
- Participates in providing monthly progress reports to the program manager as well as to clients and sponsors
- Position responsibilities and decision-making, involving evaluation of project information, impact the direction and/or success of the project or task.
- Decisions may require developing or applying alternatives or precedents and errors are not typically apparent.

Contacts:
- Communicates with vendors to establish purchase specifications for research and testing materials, non-capital equipment and capital equipment
- Participates in meetings with clients

Authority:
- Supervises and manages a team of undergraduate students in research and laboratory activities
- Supervises operation and maintenance of testing equipment
- Instructs others in the use of equipment
• Assists graduate students in completing, executing and planning R&D projects through testing, data analysis, design and manufacturing
• Provides safety and environmental management supervision and advice for graduate and undergraduate students

Fiscal Responsibility:
• Monitors (reviews and checks for accuracy) program budgets totaling up to or exceeding $600K
• Researches, recommends and determines specifications for purchase of equipment, materials and supplies for use in research projects
• Analyzes (critically review budgetary data) program budgets totaling up to or exceeding $225K and recommends spending dollars accordingly
• Administers (forecasts and controls spending) program budgets totaling up to or exceeding $55K and determines spending accordingly

Perform other reasonably related duties as assigned.

Knowledge & Skill Qualifications:
• B.S. in Electrical or Computer Engineering with three years of relevant experience in a professional or academic research environment or an equivalent combination of education and experience is preferred.
• Experience in the following areas is required: programming and operation of robotic systems and the associated interfacing with other control systems including PLCs (programmable logic controller) and HMI (human-machine interface) / SCADA (supervisory control and data acquisition) software
• Proven experience with ABB systems, system design, programming, simulation and testing, and system start-up is required.
• Experience advising and directing student research desired.
• Coursework or equivalent experience in some of the following areas: advanced composites, finite element modeling, engineering design, advanced mechanics of materials is desired.
• Excellent oral and written communication skills required.
• Demonstrated ability to handle multiple projects and constant deadlines.

Position Type: Contingent on funding and successful performance.

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) will be necessary to meet the requirements of the position. The employee shall establish regular office hours and in consultation with the supervisor, adjust the work schedule as appropriate.

Work Environment: Work will be performed at the Advanced Structures and Composites Center 87,000 ft² laboratory with a world-leading team of over 150 faculty, staff and students who conduct contract research with a variety of public and private entities developing the next generation of low-cost, high performance composite materials.

Schedule for Evaluation: In the initial six months of employment and annually thereafter in accordance with the UMPSA agreement.
**Salary:** This position is in Salary Band 4, Job Family 7.

The finalist for this position must successfully complete a pre-employment physical.

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.