TITLE: Engineer I

DEPARTMENT: Advanced Structures and Composites Center

DATE:

REPORTS TO: Engineer IV

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

Essential Duties & Responsibilities:
Scope:
- Designs and conducts tests, interprets and analyzes data, writes reports and presents findings to team members
- Operates and maintains sophisticated scientific testing equipment to conduct research with broad instruction and objectives
- Develops and writes work instructions and executes changes in drafts as required
- Writes industrial contract proposals to obtain funding
- Assists in writing technical reports and papers detailing research and development activities for journals, periodicals, clients, and sponsors
- Arranges schedules for industrial contracts

Impact:
- Participates in providing monthly progress reports to the program manager as well as to clients and sponsors
- Moderate responsibility for decision-making, involving evaluation of project and data information.
- Decisions may require developing or applying alternatives or precedents and the errors in the project work and data analysis may not be 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
- As part of each project, interacts regularly with a team of post-doctoral fellows, peers, Advanced Structures and Composites Center laboratory staff, students and faculty

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
- Provides safety and environmental management supervision and advice for undergraduate students

Fiscal Responsibility:
• Monitors (reviews and checks for accuracy) project budgets totaling up to or exceeding $180K
• Analyzes (critically review budgetary data) project budgets totaling up to or exceeding $19K and recommends spending dollars accordingly
• Researches, recommends and determines specifications for purchase of equipment, materials and supplies for use in research projects

Perform other reasonably related duties as assigned.

Knowledge & Skill Qualifications:

• Typically has the education associated with B.S. in related Engineering field.such as mechanical, naval architecture, or civil engineering.
• No previous relevant professional experience required
• Experience in some of the following areas: model testing, naval architecture, marine engineering, instrumentation, advanced composites, finite element modeling, engineering design, advanced mechanics of materials.
• Experience in carrying out static and dynamic laboratory load tests of composites is beneficial
• Experience using CAD software such as solid works preferred
• Experience fabricating metallic and composites components.
• Excellent oral and written communication skills required.
• Experience in commercial research preferred.
• Demonstrated ability to handle multiple projects and constant deadlines.
• Ability to work independently as well as in a team environment with faculty, post-doctoral fellows, lab technicians, management, students, and research sponsors required.

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 100,000 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. The ISO 17025-accredited laboratory employs over 180 people with expertise in model testing, multi-scale materials and structures design and evaluation, composite materials analysis and manufacturing, finite element analysis and multi-physics modeling techniques. W2 is the newest addition to the laboratory and consists of a deep multi-paddle wave basin with an integrated, rotatable wind tunnel that permits simultaneous application of scaled wind and wave environments for sophisticated floating body model tests. W2 is the only one of its kind in the world equipped with a rotating wind tunnel over a wave basin and also has a movable floating floor and a tow carriage. The facility is unique suited to design and test ocean energy devices, ship structures, oil and gas structures, as well as the effects of coastal erosion and sea level rise.
**Schedule for Evaluation:** In the initial six months of employment and annually thereafter in accordance with the UMPSA agreement.

**Salary:** This position is in a Salary Band 3, 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.